

Curriculum Vitae

Mario Bortolozzi, Ph.D.

PERSONAL DATA

Citizenship: Italian.

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LABORATORY Veneto Institute of Molecular Medicine (VIMM).

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EDUCATION

- **2008.** Ph.D. in Neurobiology at the School of Biosciences, Director Prof. Tullio Pozzan, University of Padua, Italy.
- **2004.** Degree in Physics, University of Padua, Italy.

CURRENT POSITION

- **April 2017 – Present.** Associate professor with permanent position at the University of Padua, Department of Physics and Astronomy “G. Galilei”, Via Marzolo 8, 35131 Padua, Italy.
- **September 2013 – Present.** P.I. (Principal Investigator) at the Venetian Institute of Molecular Medicine, Via. G. Orus 2, 35129, Padova. Scientific Director: Prof. Luca Scorrano.
- **December 2010 – March 2017.** Assistant professor at the University of Padua, Department of Physics and Astronomy “G. Galilei”, Via Marzolo 8, 35131 Padua, Italy.

LAB MEMBERS

Supervisor of 9 post-docs, 2 PhD students, 2 research fellows and 20 bachelor/master’s degree students.

PRESENT

2021 **Diego Lopez**, biophysicist with a postdoctoral fellowship.

2021 **Erva Bayraktar**, pharmacologist with a postdoctoral fellowship.

PAST

2020 **Stefania Vogiatzis**, biologist with a postdoctoral fellowship.

2020 **Stefano Trevisan**, physics master’s degree student.

2019-2020 **Simona Pisu**, biomedical engineer with a postdoctoral fellowship.
2019-2020 **Michela Pannella**, biologist with a postdoctoral fellowship.
2018 **Michele Gintoli**, physicist with research contract.
2017-2018 **Saima Imran**, biologist with a postdoctoral fellowship.
2015-2017 **Andrea Carrer**, physicist with research contract.
2015-2016 **Francesca Bruno**, biotechnologist with research contract.
2013-2017 **Giulia Crispino**, biologist with a postdoctoral fellowship.
2013-2016 **Alessandro Leparulo**, biologist with a postdoctoral fellowship.
2013-2015 **Francesco Zonta**, physicist with a postdoctoral fellowship.

RESEARCH STATEMENT

Prof. Bortolozzi's research activity, placed at VIMM of Padova, combines expertise from Physics, Biology and Medicine as connexin function involves structural, chemical and biological aspects. Advanced optical microscopy (2-photon, STED, second and third harmonic generation), electrophysiology as well as systems biology tools are utilized to answer important biological questions. The lab is currently focusing on two main projects: (i) the study of connexin 32 (Cx32) protein, whose mutations cause the X-linked form of Charcot-Marie-Tooth peripheral neuropathy (CMTX1), a degenerative motor and sensory disorder for which there is no cure; (ii) the study of pathological variants of the gene encoding the beta-glucocerebrosidase (GBA) lysosomal enzyme, known to confer a 5- to 7-fold increased risk to develop Parkinson's disease (new starting project).

LAB TECHNIQUES

EXPERIMENTAL BIOPHYSICS

- *In vitro* and *in vivo* fluorescence optical microscopy of second messenger dynamics (Ca^{2+} , cAMP, cGMP, IP_3 , NO) and voltage-sensitive dyes by wide-field, confocal and 2-photon microscopy.
- Advanced microscopy: STED, multiphoton multicolour, second and third harmonic generation (SHG/THG).
- UV photoliberation of Ca^{2+} -, IP_3 - and NO-caged compounds.
- Electrophysiology: dual patch-clamp (whole-cell and single channel recordings).

THEORETICAL BIOPHYSICS

- Numerical simulations of Ca^{2+} and H^+ dynamics in cellular systems described in three-dimensions by reaction-diffusion equations.
- Full-atom molecular dynamics simulations of connexin channels embedded in a realistic plasma membrane.
- Data analysis tools developed by the Matlab software package.

CELLULAR MODELS

- Immortalized cultured cells (HeLa, CHO, HEK, Schwannoma cells).
- Human precursor skin stem cells differentiated into functional neurons and glial cells.
- IPS cells differentiated into functional neurons and Schwann cells.
- Mouse models of deafness and peripheral neuropathy.

PUBLICATIONS

General overview (period: 2006-2020)

28 articles in peer-reviewed journals. Average Impact Factor = 7.9;

5 book chapters;

1 monograph;

4 abstracts and congress proceedings;

1 patent;

Total citations = 1205 (without self citations, source: WOS);

Total citations = 1699 (Source: Google Scholar);

H-index WOS = 19.

H-index Google Scholar = 21.

REVIEWER FOR PEER-REVIEWED JOURNALS

Topic Editorial Board member of *International Journal of Molecular Sciences*

Review Editor of *Frontiers in Physiology*.

Review Editor of *Scienze e Ricerche*.

Referee of *Brain Research*.

Referee of *Biology Open*.

Referee of *Journal of Molecular Medicine*.

Referee of *Frontiers in Cellular Neuroscience*.

Referee of *Frontiers in Bioengineering*.

Referee of *Oxidative Medicine and Cellular Longevity*.

Referee of *Journal of the Peripheral Nervous System*.

ACADEMIC SUPERVISION

- **Supervisor** of Stefano Trevisan for the master's thesis in Civil, Environmental and Architectural Engineering entitled: "Numerical simulation of molecular diffusion in cellular domains using a cost-effective differential method". Date: 14/10/2020. Marks: 98/110.
- **Supervisor** of Maddalena Bin for the master's thesis in Physics entitled: "Investigating the influence of water in lysozyme structure and dynamics". Date: 15/7/2020. Marks: 110/110.
- **Supervisor** of Lisa Segato for the master's thesis in Medical Biotechnologies entitled: "Impact of HspB5 phosphorylation on the interaction with vimentin". Date: 29/11/2019. Marks: 110/110 cum laude.
- **Supervisor** of Ilaria Urbani for the bachelor's thesis in Physics entitled: "Investigating ATP release through Cx32 hemichannels using biosensors based on Förster Resonance Energy Transfer". In progress.
- **Supervisor** of Davide Scantamburlo for the master's thesis in Medical Biotechnologies entitled: "Development of hydrogel for organoid 3D culture". Date: 24/9/2019. Marks: 90/110.
- **Supervisor** of Alessandra Sabatti for the bachelor's thesis in Physics entitled: "Validation of a mathematical model for the estimate of intracellular calcium ion fluctuations". Date: 23/9/2019. Marks: 104/110.
- **Supervisor** of Giacomo Toso for the bachelor's thesis in Physics entitled: "Studio del rilascio di ATP da parte degli emicanali di connessina 32 mediante tecniche biofisiche". Date: 16th July 2019. Marks: 98/110.

- **Supervisor** of Marco Simionato for the bachelor's thesis in Physics entitled: "Electrophysiological analysis of human cells derived from neuronal differentiation of skin mesenchymal stem cells". Date: 14th December 2018. Marks: 88/110.
- **Supervisor** of Angela Pellizzon for the master's thesis in Medical Biotechnologies entitled: "Development of an iPS cell-derived in vitro model for the study of peripheral neuropathies". Date: 19th July 2018. Marks: 97/110.
- Assistant supervisor of Francesca Scantamburlo for the bachelor's thesis in Biology entitled "Feasibility analysis of a myelinating neuron-Schwann cells co-culture derived from stem cells for the biophysical survey of connexin 32 and its pathological mutations". Date: 18th September 2017.
- **Supervisor** of Chiara Monni for the master's thesis in Physics entitled: "Theoretical study of connexin 32 channels by coarse-grained molecular dynamics techniques". Date: 18th September 2017. Marks: 110/110.
- **Supervisor** of Martina Nicoletti for the master's thesis in Physics entitled: "Development of a cellular model for the study of the peripheral nervous system by stem cells and microfluidic chips". Date: 18th September 2017. Marks: 110/110.
- **Supervisor** of Mirko Zanon for the master's thesis in Physics entitled: "3D-reconstruction of connexin 32 channels distribution in the myelin of Schwann cells by advanced optical microscopy". Date: 24th October 2016. Marks: 110/110.
- **Supervisor** of Alessandro Faggiani for the master's thesis in Physics entitled: "Development of a model based on differential equations of reaction-diffusion for the estimation of intracellular Ca²⁺ concentration". Date: 26th September 2016. Marks: 110/110 cum laude.
- **Supervisor** of Francesca Bruno for the master's thesis in Medical Biotechnologies entitled: "Development of a human stem cell-derived neuronal culture for the study of peripheral neuropathies". Date: 11th December 2015. Marks: 98/110.
- **Supervisor** of Chiara Nardin for the master's thesis in Physics entitled: "Optimization of an advanced optical imaging apparatus suitable for intravital multiphoton microscopy". Date: 24th September 2015. Marks: 110/110 cum laude.
- **Supervisor** of Matteo Abbate for the bachelor's thesis in Physics entitled: "Computation of Molecular Dynamics descriptors and their application to connexin channels". Date: 24th September 2014. Marks: 102/110.
- **Supervisor** of Andrea Carrer for the master's thesis in Physics entitled: "Biophysical analysis of connexin 32 hemichannels in health and disease". Date: 24th July 2014. Marks: 97/110.
- Assistant supervisor of Stefano Ceolin for the master's thesis in Physics entitled: "Bystander Effects in Photodynamic Therapy of Cancer". Date: 24th July 2014. Marks: 110/110 cum laude.
- **Supervisor** of Marco Grison for the Galilean School of Higher Education master's thesis in Physics entitled: "Single molecule force spectroscopy on α -actinin EF-hand domain". Date: 22nd November 2013. Marks: 100/100.
- **Supervisor** of Lorenzo Dal Corso for the master's thesis in Physics entitled: "Electrophysiological characterization of Cx30 and Cx30T5M channels". Date: 10th October 2012. Marks: 107/110.

- **Supervisor** of Marco Grison for the master's thesis in Physics entitled: "Stimulation of hair-cell bundles with optical tweezer". Date: 10th September 2012. Marks: 110/110 cum laude.
- Assistant supervisor of Maria Federica Sanasi for the master's thesis entitled: "Molecular permeability of connexin channels", Supervisor Prof. Fabio Mammano. Date: 21st September 2011. Marks: 110/110 cum laude.
- Assistant supervisor of Elena Simeonato for the master's thesis entitled: "Ca²⁺ signals in Kölliker organ: a study based on the hemicochlea preparation". Supervisor Prof. Fabio Mammano. Date: 20th July 2010. Marks: 110/110 cum laude.
- Assistant supervisor of Bianca Cali for the master's thesis entitled: "Comparative study of spontaneous Ca²⁺ signals in cochlear organotypic cultures from C57BL/6 e NFKB1 p50 (-/-) mice", Supervisor Prof. Fabio Mammano. Date: 20th July 2010. Marks: 110/110 cum laude.
- Assistant supervisor of Federico Ceriani for the master's thesis entitled: "A computational framework to analyze intracellular calcium oscillations and intercellular calcium waves in cochlear supporting cells", Supervisor Prof. Fabio Mammano. Date: 22nd September 2010. Marks: 110/110.

ACADEMIC TEACHING

- **2018–Present.** Regular teacher of the Cellular/Molecular imaging course (4 hours) at the Ph.D. School in Neurosciences, Department of Neurosciences, University of Padua.
- **2018–Present.** Regular teacher of the Biological Physics course (48 hours) at the Department of Physics and Astronomy, University of Padua.
- **2017–Present.** Applied Physics course (20 hours) at the Physiotherapy master's degree course, Molecular Medicine School, University of Padua.
- **2014.** Regular teacher of the Cellular Biophysics course (12 hours) at the Ph.D. School in Physics, Department of Physics and Astronomy, University of Padua.
- **2013–Present.** Bioimaging course (16 hours) at the Medical Biotechnologies master's degree course, Molecular Medicine School, University of Padua.
- **2013–Present.** Regular teacher of the Physics and Informatics course (40 hours) at the Obstetrics degree course, Medicine School, University of Padua.
- **2009.** Instructor at the Eurohear Theoretical Training on Therapy, VIMM, Padova, (September 21st-25th).
- **2008–2010.** Mathematics course (10 hours) to undergraduate students of the Padua University Medical Faculty.
- **2007.** Instructor at the Imaging Theoretical Training meeting, Venice, Italy (June, 16th-22nd).
- **2006–2007.** Mathematics supplementary course (10 hours) to undergraduate students of the Padua University Medical Faculty.
- **2005.** Physics tutorial and teaching support to undergraduate students of the Padua University Medical Faculty.

PATENTS & REPOSITORIES

- Italian patent nr. 102017000084299 deposited on 24th July 2017 for the invention “Peptides derived from GAP24 for treating the X-linked form of Charcot-Marie-Tooth peripheral neuropathy”.
Link: <https://www.knowledge-share.eu/en/patent/treatment-of-charcot-marie-tooth-neuropathy/>
- Plasmid repository in Addgene: https://www.addgene.org/Mario_Bortolozzi/ (ID: 78150; 78151).

Date: 20/9/2021

Signature 

Curriculum Vitae et Studiorum di Chiara Peres

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Research Interests

Non-linear advanced microscopy techniques (two-photon fluorescence excitation, STED, SHG and CARS microscopy), polarization-resolved microscopy, tissues structure morphological and quantitative analysis, *in vivo* calcium signal imaging and analysis, *in vivo* morphological and functional skin imaging, *in vivo* light imaging techniques on mice.

Current Position

1st Jan 2020 – 31st Dec 2021 Post-doc fellow at IBBC Department of CNR, Monterotondo, Rome for the TELETHON project: “A therapeutic approach for rare genodermatoses caused by aberrant connexin hemichannels”. Responsible for the *in vivo* light imaging instrumentations for EMMA.

Previous Positions

1st June 2016 – 31st Dec 2019 Post-doc fellow at IBCN Department of CNR, Monterotondo, Rome.
Co-design, assembly, alignment and everyday optimization of a 2PE - STED microscope coupled with a commercial scanning-head for *in vivo* imaging.
Design, building, usage of optical architecture for *in vivo* mouse studies.
Mice surgery and mouse colony management.

1st Jan – 30th April 2016 Fellow at IIT, Nanoscopy group and Nikon @ IIT imaging center
Optimization of optical architectures working in the R&D of IIT Nikon center, polarization resolved second harmonic generation studies of biological samples.

Education

Apr 2016 *Ph.D., Nanosciences*
Italian Institute of Technology (IIT) and University of Genova (joint PhD program), Italy
Ph.D Thesis Title: “*Design and Development of Advanced Light Microscopy Methods*”.
Tutor: Dr. Paolo Bianchini; Supervisor: Prof. Alberto Diaspro.

Jul-Dec 2015 *Visiting Student*
Massachusetts Institute of Technology (MIT), Boston, MA, USA.
Project Title: “Polarization-based quantitative phase microscope”.
Tutor: Dr. Zahid Yaqoob; Supervisor: Prof. Peter T.C. So.

2012 *M.Sc. in Physics (curriculum Biophysics)*. Score: 110 cum laude.
Università degli Studi di Palermo, Italy.
Master Thesis Title: “*Production and characterization of BSA aggregates gels*”.
Supervisor: Prof. Maurizio Leone; Co-supervisor: Prof. Valeria Militello

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2009 *B. Sc. in Physics*. Score: 110 cum laude.
Università degli Studi di Palermo, Italy
Supervisor: Prof. Antonio Cupane

Professional Experiences

- May 5th – December 30th 2019 Visiting Scientist at SIAIS Protein Center at ShanghaiTech University (Shanghai, China)
- Alignment and optimization of the 2PE external line of a Leica STED SP8 confocal commercial microscope for 2PE-STED.
 - 2PEF and SHG microscopy for *in vivo* imaging of genetically expressed calcium sensors in the skin and in the brain of specific murine models.
- Invited by: Prof. Guang Yang and Prof. Fabio Mammano
- Jan 1st – April 30th 2016 Fellow at the Optical Nanoscopy Group at IIT (Genoa, Italy)
- Optimization of optical architectures in the R&D of IIT Nikon centre.
- Supervisors: Dr. Paolo Bianchini, Prof. Alberto Diaspro
- July 1st – Nov 30th 2015 Visiting Student at the Laser Biomedical Research Center at MIT (Boston, MA, USA).
- QPI and polarization-based quantitative phase microscopes.
- Supervisors: Dr. Zahid Yaqoob, Prof. Peter T.C. So
- Jan 1st 2013– Dec 30th 2015 PhD fellowship at the Optical Nanoscopy Group at IIT (Genoa, Italy)
- 2PEF and SHG microscopy, polarization-resolved imaging, STED microscopy.
- Supervisors: Dr. Paolo Bianchini, Prof. Alberto Diaspro
- Feb 1st – Dec 22nd 2012 Master Thesis Internship at the *Biophysmol Lab* (Palermo, Italy).
- UV, Vis and IR Spectroscopy and Atomic Force Microscopy. Biological sample preparation
- Supervisors: Dr. Giovanna Navarra, Prof. Valeria Militello, Prof. Maurizio Leone
- April 1st – Oct 30th 2008 Internship at the *CNR- IBF department* (Palermo, Italy).
- Laser light scattering on protein hydrogels.
- Supervisors: Dr. Mauro Manno, Prof. Pier Luigi San Biagio

Professional Skills

- Non-linear Microscopy: design, assembly and optimization of a two-photon microscope for *in vivo* measurement on anesthetized animals. Coupling of a two-photon laser source with commercial microscopes for 2PE and polarization-resolved SHG measurements.
- Super-resolution Microscopy: design, assembly and optimization of multi-color STED microscopes.
- Expert user of confocal, two-photon excitation, second harmonic generation and STED microscopy on custom-made and commercial microscopes.

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- *In vivo* calcium imaging: analysis and characterization of the fluorescence signal of endogenous and exogenous calcium sensors in the skin, in the dorsal skinfold chamber, in the brain and in the organotypic cultures from inner ear and from dorsal skin of different murine models.
- Expert user of qualitative and quantitative methods for tissue samples analysis based on nonlinear microscopy techniques (two-photon microscopy, polarization resolved Second Harmonic Generation Microscopy).
- QPI and Polarization Resolved Imaging: assembly and development of a polarization-based quantitative phase microscope, and implementation of related measurements analysis system.
- FTIR and fluorescence spectroscopy measurements on biological samples.
- Experience in design, building and usage of several optical systems for different *in vivo* imaging techniques on mice.
- Experience with embedded systems design using the Arduino programming environment.
- Professional user of: MatLab, Origin, Fiji/ImageJ and common softwares related to image analysis, scientific research and publishing.
- Mouse handling and restrain skills, basic mouse injection capability and knowhow of dorsal skinfold chamber application and calvaria exposition in mice. Basics of mouse colony management.

Awards

- 2021: Italian **National Grant** to attend the National conference XXV Congresso Nazionale SIBPA 2021, June 28 – July 1, 2021, online.
- 2015: 1st place for the best image in the International competition “**Art of Science Image Contest**” organized by the Biophysical Society.
- 2015: International **Travel Award** provided by the Biophysical Society to attend the 59th Biophysical Society Annual Meeting.
- 2014: Italian **National Grant** to attend the National conference XXII Congresso Nazionale SIBPA 2014, September 21-24, 2014, Palermo, Italy.

Attendance to Schools & Workshops

- *Corso di Formazione ed Aggiornamento per la Protezione degli Animali da Laboratorio nella Ricerca Scientifica*, February 18-22, 2019, Università Cattolica, Roma, Italy.
- *Scuola di Calcolo Scientifico con MATLAB*, July 18-29, 2016, Università degli Studi di Palermo, Palermo, Italy.
- *International School of Biophysics “Antonio Borsellino”, 43rd Course: Nanoscale biophysics: focus on methods and techniques*, April 17 – 24, 2016, Erice (TP), Italy.
- *The Leica Microsystem 4th European Super-resolution User Club Meeting*, June 18-19, 2014, Weatherall Institute of Molecular Medicine, University of Oxford, United Kingdom.
- *School of Photonics 2014*, March 30- April 3, 2014, Cortona, Italy.
- *3rd IIT International Course on Advanced Optical Microscopy Methods*, December 17, 2013, Genoa, Italy.

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- *The Leica Microsystem 3rd European Super-resolution User Club Meeting*, June 17-19, 2013, Genoa, Italy.

Teaching Experiences

- Teacher of theoretical aspects and of hands-on practice of alignment techniques for a custom-made microscope at the *1st NIC@IIT - MICROSCOPY 2.0 PRACTICAL WORKSHOP on ADVANCED MICROSCOPY*, December 2-5, 2014, Genoa, Italy.

Languages

Italian (native), English (TOEFL, 19th Oct 2012. Total Score: 100)

Publications

Published

1. Kuang Y., Zorzi V., Buratto D., Ziraldo G., Mazzarda F., Peres C., Nardin C., Salvatore A.M., Chiani F., Scavizzi F., Raspa M., Qiang M., Chu Y., Shi X., Li Y., Liu L., Shi Y., Zonta F., Yang G., Lerner R.A., Mammano F.; “*A potent antagonist antibody targeting connexin hemichannels alleviates Clouston syndrome symptoms in mutant mice*”, *EBioMedicine*, 57,102825 (2020).
2. Mazzarda F., D'Elia A., Massari R., De Ninno A., Bertani F.R., Businaro L., Ziraldo G., Zorzi V., Nardin C., Peres C., Chiani F., Tettey-Matey A., Raspa M., Scavizzi F., Soluri A., Salvatore A.M., Yang J., Mammano F.; “*Organ-on-chip model shows that ATP release through connexin hemichannels drives spontaneous Ca²⁺ signaling in non-sensory cells of the greater epithelial ridge in the developing cochlea*”, *Lab On Chip* 20(16) 3011-3023 (2020).
3. Nardin C., Peres C., Mazzarda F., Ziraldo G., Salvatore A.M., Mammano F.; “*Photosensitizer Activation Drives Apoptosis by Interorganellar Ca²⁺ Transfer and Superoxide Production in Bystander Cancer Cells*”, *Cells* 8 (10), 1175 (2019).
4. Fetoni A. R., Zorzi V., Paciello F., Ziraldo G., Peres C., Raspa M., Scavizzi F., Salvatore A.M., Crispino G., Tognola G., Gentile G., Spampinato A.G., Cuccaro D., Guarnaccia M., Morello G., Van Camp G., Fransen E., Brumat M., Girotto G., Paludetti G., Gasparini P., Cavallaro S., Mammano F.; “*Cx26 partial loss causes accelerated presbycusis by redox imbalance and dysregulation of Nfr2 pathway*”, *Redox Biology*, 19, 301-307 (2018).
5. Zorzi V., Paciello F., Ziraldo G., Peres C., Mazzarda F., Nardin C., Pasquini M., Chiani F., Raspa M., Scavizzi F., Carrer A., Crispino G., Ciubotaru C. D., Monyer H., Fetoni A. R., Salvatore A.M., Mammano F.; “*Mouse Panx1 is dispensable for hearing acquisition and auditory function*”, *Frontiers in molecular neuroscience*, 10, 397 (2017).
6. Xu L., Carrer A., Zonta F., Qu Z., Ma P, Li S., Ceriani F., Buratto D., Crispino G., Zorzi V., Ziraldo G., Bruno F., Nardin C., Peres C., Mazzarda F., Salvatore A. M., Raspa M., Scavizzi F., Chu Y., Xie S., Yang X., Liao J., Liu X., Wang W., Wang S., Yang G., Lerner R. A., Mammano F.; “*Design and*

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- characterization of a human monoclonal antibody that modulates mutant connexin 26 hemichannels implicated in deafness and skin disorders*”, *Frontiers in molecular neuroscience*, 10, 298 (2017).
7. Coluccino L., Peres C., Gottardi R., Bianchini P., Diaspro A., Ceseracciu L.; “*Anisotropic viscoelastic biomechanical mapping of knee meniscus cartilage*”, *JABFM*, 15 (1) 77-83 (2016).
 8. Korobchevskaya K., Peres C., Li Z., Antipov A., Sheppard C.J.R., Diaspro A. and Bianchini P. : “*Intensity Weighted Subtraction Microscopy Approach for Image Contrast and Resolution Enhancement*”, *Sci. Rep.* 6, 2516 (2016).
 9. Picone P., Navarra G., Peres C., Contardi M., San Biagio P.L., Di Carlo M.; “*Data concerning the proteolytic resistance and oxidative stress in LAN5 cells after treatment with BSA hydrogels*”, *Data in Brief*, 9, 324-327 (2016).
 10. Navarra G., Peres C., Contardi M., Picone P., San Biagio P.L., Di Carlo M., Giacomazza D., Militello V.; “*Heat- and pH-induced BSA conformational changes, hydrogels formation and their applications as 3D cell scaffold.*”, *Archives of biochemistry and biophysics*, 606, 134-142 (2016).
 11. Hosseini P., Zhou R., Kim Y.I., Peres C., Diaspro A., Kuang C., Yaqoob Z., So P.T.C.: “*Pushing phase and amplitude sensitivity limits in interferometric microscopy*”, *Opt. Lett.* 41, 1656-1659 (2016).
 12. Bianchini P., Peres C., Oneto M., Galiani S., Vicidomini G., Diaspro A.; “*STED nanoscopy: a glimpse into the future*”, *Cell Tissue Res.* 360 (1) 143-150 (2015).
 13. Hernández Coto I., Peres C., Znacchi Cella F., d’Amora M., Christodoulou S., Bianchini P., Diaspro A., Vicidomini G.; “*A new filtering technique for removing anti-Stokes emission background in gated CW-STED microscopy*”, *J. Biophotonics* 1–5 (2014).

Under Revision

1. Nardin C., Peres C., Putti S., Orsini T., Colussi C., Mazzarda F., Raspa M., Scavizzi F., Salvatore A. M., Chiani F., Tettey-Matey A., Kuang Y., Yang G., Retamal M. A., Mammano F.; “*Photodynamic therapy in combination with S-nitrosoglutathione dramatically improves melanoma treatment efficacy*”, *Cancers*.
2. Donati V. †, Peres C. †, Nardin C., Scavizzi F., Raspa M., Ciubotaru C. D., Pedersen, M.G., Bortolozzi M., Mammano F., “*Calcium signaling in the photodamaged skin: in vivo experiments and mathematical modeling*”, *Function*.

Submitted

1. Peres C., Nardin C., Yang G., Mammano F., “*Commercially-derived versatile optical architecture for two-photon STED, wavelength mixing and label-free microscopy*”, (2021)

Preprint

2. Peres C., Nardin C., Yang G., Mammano F., “*How to Extend the Capabilities of a Commercial Two-Photon Microscope to Perform Super-Resolution Imaging, Wavelength Mixing and Label-Free Microscopy*”, *Bioarchive* (2021)
3. Donati V., Peres C., Nardin C., Scavizzi F., Raspa M., Ciubotaru C. D., Cojok D. A., Bortolozzi M., Mammano F., “*Calcium signaling in the photodamaged skin*”, *Bioarchive* (2021).

Contributions to conferences

Oral Communications

1. Peres C., Nardin C., Yang G., Mammano F., “*A commercially-derived multimodal microscope for 2P-STED, 2C-2PE, SHG and CARS imaging*”, **XXII Congresso Nazionale SIBPA**, June 28 - July 1, 2021, Italy.
2. Peres C., D’Autilia F., Castello M., Lanzaò L., Bianchini P., Diaspro A.; “*A novel approach to the analysis of Polarization-Resolved SHG images*”, **Focus On Microscopy 2015**, March 29 - April 1, 2015, Göttingen, Germany.
3. Peres C., D’Autilia F., Oneto M., Coluccino L., Cesaracciu L., Bianchini P., Diaspro A. “*Tissues Imaging By Means Of Polarization-Resolved SHG Microscopy*”, **XXII Congresso Nazionale SIBPA**, September 21-24, 2014, Palermo, Italy.

Posters

1. Bianchini P. , Korobchevskaya K., Peres C., Saggau P., Sheppard C.J.R., Diaspro A.: “*Near-Infrared Nanoscopy, towards label-free approaches*”, **Focus On Microscopy 2016**, March 20-23, 2016 Taipei, Taiwan.
2. Peres C., Zhou R., Hosseini P., Martin A.F., Bianchini P., Diaspro A., So P.T.C., Yaqoob Z.: “*Polarization-Resolved phase microscopy for Quantitative Retardance Imaging*”. **60th Biophysical Society Annual Meeting**, February 27- March 2, 2016, Los Angeles, California, USA.
3. Korobchevskaya K., Peres C., D’Autilia F., Mazumder N., Lanzaò L., Saggau P., Sheppard C.J.R., Diaspro A., Bianchini P.: “*Label-free linear and non-linear excitation Nanoscopy*”. **60th Biophysical Society Annual Meeting**, February 27- March 2, 2016, Los Angeles, California, USA.
4. Oneto M., Peres C., D’Autilia F., Mazumder N., Galiani S., Diaspro A., Bianchini P.: “*Chromatic aberration in 3D multicolor STED nanoscopy*”. **Focus On Microscopy 2015**, March 29- April 1, 2015, Göttingen, Germany.
5. Peres C., Oneto M., D’Autilia F., Galiani S., Lanzaò L., Vicidomini G., Diaspro A., Bianchini P.: “*3 Color - 3 Dimensional STED nanoscopy*”. **59th Biophysical Society Annual Meeting**, February 6-11, 2015, Baltimore, Maryland, USA.
6. Militello V., Navarra G., Vetri V., Peres C., Leone M. “*BSA hydrogels: from the early aggregates to the final novel biomaterials*”. **IUPAB 2014**, August 3-7, 2014, Brisbane, Australia.
7. Navarra G., Peres C., Carfi Pavia F., Leone M., Militello V. “*Spectroscopic and microscopic characterization of BSA hydrogels: towards new biomaterials*”. **SIB 2014**, July 2-4, 2014, Palermo, Italy.
8. Coluccino L., Peres C., Bianchini P., Diaspro A., Ayadi F., Athanassiou A., Cesaracciu L. “*Polyvinylalcohol engineered hydrogel for knee meniscus regeneration*”. **TERMIS EU 2014**, June 10-13, 2014 Genoa, Italy.
9. Diaspro A., Sheppard C. J., Bianchini P., Vicidomini G., Cella Zancacchi F., Peres C. “*Can fluorescence and SHG data be enriched by Mueller Matrix signature?*”. **Focus On Microscopy 2014**, April 13-16, 2014, Sydney, Australia.

Curriculum Vitae et Studiorum

10. Peres C., D'Autilia F., Lanzaò L., Bianchini P., Diaspro A. “Polarization-resolved SHG towards collagen imaging”. **58th Biophysical Society Annual Meeting**, February 15-19 2014, San Francisco, California. *Biophysical Journal, Volume 106, Issue 2, Supplement 1, 28 January 2014, 204.*
11. Hernández Coto I., Bianchini P., Peres C., De Miguel G., Diaspro A., Vicidomini G. “A new efficient implementation of 2PE-STED microscopy”. **58th Biophysical Society Annual Meeting**, February 15-19 2014, San Francisco, California. *Biophysical Journal, Volume 106, Issue 2, Supplement 1, 28 January 2014, 605.*
12. Peres C., D'Autilia F., Coluccino L., Cesaracciu L., Bianchini P., Diaspro A. “Polarization- modulated SHG characterization of collagen for meniscus regeneration”. **Methods and Application of Fluorescence 13**, September 8-11 2013, Genoa, Italy.
13. Peres C., Militello V., Navarra G., D'Amico M., Leone M., Vetri V. “BSA hydrogels: from the early aggregates to the final novel biomaterials”. **FISMAT13**, September 9-13, 2013, Milan, Italy.

Referee contacts

Alberto Diaspro

Email: alberto.diaspro@iit.it

Paolo Bianchini

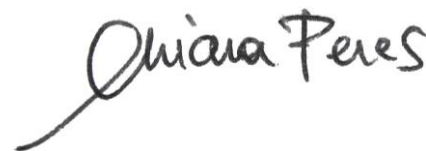
Email: paolo.bianchini@iit.it

Fabio Mammano

Email: fabio.mammano@cnr.it

Roma li 14/09/2021

FIRMA



DICHIARAZIONE SOSTITUTIVA DI CERTIFICAZIONE / DELL'ATTO DI NOTORIETA' (ART. 46 E ART. 47 DEL DPR 28/12/2000 N° 445)

Il sottoscritto Gabriele Turacchio
consapevole della responsabilità penale prevista dall'art. 76 del D.P.R. 445/2000, per le ipotesi di falsità in atti e dichiarazioni mendaci ivi indicate

DICHIARA

CURRICULUM VITAE

FORMATO EUROPEO

INFORMAZIONI PERSONALI

Nome, Cognome	Gabriele TURACCHIO
E-mail	gabriele.turacchio@ibbc.cnr.it
Sito web	www.ibbc.cnr.it
Nazionalità	Italiana

Se dipendente CNR indicare: **N. MATRICOLA 12605 – COLLABORATORE TECNICO E.R. (VI LIVELLO) ISTITUTO DI BIOCHIMICA E BIOLOGIA CELLULARE**

TITOLO DI STUDIO

1993	Diploma di maturità professionale per "Tecnico delle Industrie Chimiche" Istituto Professionale di Stato "D.U. Di Marzio", Pescara, Italia.
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ESPERIENZA PROFESSIONALE (ATTIVITÀ DI LABORATORIO)

Nov 2017-ad oggi	Collaboratore Tecnico Enti di Ricerca a TEMPO INDETERMINATO (bando 367.117), Istituto di Biochimica delle Proteine (IBP), Consiglio Nazionale delle Ricerche (CNR), Napoli, Italia.
Nov 2010-Ott 2017	Collaboratore Tecnico Enti di Ricerca, Istituto di Biochimica delle Proteine (IBP), Consiglio Nazionale delle Ricerche (CNR), Napoli, Italia. Titolare di contratto assunzione a tempo determinato per selezione ai sensi dell'art. 15, comma 4, punto a, del CCNL 7.10.1996 su fondo conto terzi. Oggetto del contratto e ambito scientifico: "Messa a punto di tecniche di separazione ed analisi di proteine; preparazione ed analisi di campioni per la microscopia confocale ed elettronica; supporto organizzativo al laboratorio"; Biochimica, traffico intracellulare di membrana, metabolismo lipidico. Imaging e morfologia cellulare attraverso microscopia ottica e microscopia

elettronica.

Studio morfologico tramite tecnica in inclusione in resina epossidica e di localizzazione in pre embedding, Cryo-section con metodo Tokuyasu.

- Lug2009-Nov2010 Distaccato presso l'Istituto TIGEM di Napoli e associato all'Istituto di Biochimica delle Preteine – CNR di Napoli
- Lug 2001-Lug 2009 Contratto a tempo indeterminato presso il laboratorio di regolazione cellulare della Dott.ssa Daniela Corda appartenente al Dipartimento di Biologia Cellulare ed Oncologia del Consorzio Mario Negri Sud, Santa Maria Imbaro (CH).
Ambito scientifico: Biochimica, traffico intracellulare, metabolismo lipidico, biologia e morfologia cellulare mediante microscopia ottica ed elettronica. Studio morfologico di organelli cellulari tramite tecniche di inclusione in resina epossidica e di localizzazione in pre embedding.
- Lug 2000-Giu2001 Contratto di lavoro a progetto dal titolo: "Sintesi di librerie chimiche e loro impiego nelle selezioni di composti antibatterici e antiproliferativi", presso l'unità di traffico intracellulare del Dott. Albero Luini nel Dipartimento di biologia cellulare ed oncologia del Consorzio Mario Negri Sud, Santa Maria Imbaro (CH).
Ambito scientifico : Biochimica, biologia e morfologia cellulare mediante microscopia ottica ed elettronica. Studio morfologico di organelli cellulari tramite tecniche di inclusione in resina epossidica e di localizzazione in pre embedding.
- Mar 1997-Giu 2000 Titolare di una borsa di studio nell'ambito della ricerca scientifica presso l'unità di traffico intracellulare del Dott. Albero Luini nel Dipartimento di biologia cellulare ed oncologia del Consorzio Mario Negri Sud, Santa Maria Imbaro (CH).
Ambito scientifico : Biochimica, biologia cellulare, purificazione di organelli cellulari e loro studio morfologico attraverso microscopia elettronica mediante tecnica di negative staining.
- Feb 1997-Feb 1997 Frequentatore presso l'unità di traffico intracellulare del Dott. Albero Luini nel Dipartimento di biologia cellulare ed oncologia del Consorzio Mario Negri Sud, Santa Maria Imbaro (CH).

Tipo o settore di attività di ricerca

Biochimica, Biologia Cellulare e Molecolare, Traffico Intracellulare di Membrane, Fissione delle Membrane, Metabolismo Lipidico.
Imaging e Morfologia Cellulare mediante: Microscopia a fluorescenza e confocale, Microscopia Elettronica a trasmissione attraverso tecnica di negative staining, inclusione in resina epossidica e taglio mediante ultramicrotomo, Cryo-section con metodo Tokuyasu ; Microscopia Elettronica a scansione e Focused Ion Beam (FIB-SEM).

Funzione o posto occupato

Collaboratore Tecnico Enti di Ricerca - VI Livello professionale.
Responsabile del funzionamento della Facility di Microscopia Ottica, Microscopia Elettronica a Trasmissione, Microscopia Elettronica a Scansione (FIB-SEM), Ultramicrotomo e cryo-Ultramicrotomo.
Responsabile delle stanze adibite alla manipolazione di sostanze radioattive non sigillate e della gestione della dosimetria del personale esposto;
Coordinatore incaricato della corretta gestione dei rifiuti radioattivi, del rispetto delle norme antinquinamento, dei rapporti con la ditta che effettua il prelievo e smaltimento dei rifiuti sopracitati.

FORMAZIONE

In ordine di data (da – a)
[Iniziare con le più recenti ed elencare separatamente ciascun corso frequentato con successo]

Marzo 2019 Attestato di partecipazione al convegno "Uso dei locali semisotterranei e sotterranei – Problematiche autorizzative in material di sicurezza nei luoghi di lavoro", organizzato dalla ditta SPESL presso la sala convegni palazzo reale, Napoli

Luglio 2018	Corso di formazione in "Materia di radioprotezione" organizzato dalla ditta SPESL presso l'Istituto di Biochimica delle Proteine, Napoli.
Marzo 2018	Corso di formazione "Utilizzo e manipolazione dei Gas tecnici, puri e criogenici ed dei relative contenitori e impianti di distribuzione in forma gassosa e criogenica; Criobanche e sistemi di sicurezza criogenica" organizzato dal CNR in collaborazione con il Gruppo SOL, Napoli
Novembre 2017	Attestato di partecipazione alla conferenza "Correlative microscopy in life and materials sciences", organizzato dall'Istituto Superiore di Sanità (ISS) e Italian Society for Microscopical Sciences (SISM), Roma
Novembre 2017	"On-site training for Scanning Electron Microscope and Focused Ion Beam (FIB-SEM)", organizzato da Thermo Fisher Scientific presso la facility di microscopia dell'Istituto di Biochimica delle Proteine, Napoli. (days: 10 of 10 completed)
Ottobre 2017	"On-site training for Scanning Electron Microscope and Focused Ion Beam (FIB-SEM)", organizzato da Thermo Fisher Scientific presso la facility di microscopia dell'Istituto di Biochimica delle Proteine, Napoli. (days: 8 of 10 completed)
Febbraio 2017	"On-site training for Scanning Electron Microscope and Focused Ion Beam (FIB-SEM)", organizzato da Thermo Fisher Scientific presso la facility di microscopia dell'Istituto di Biochimica delle Proteine, Napoli. (days: 6 of 10 completed)
Gennaio 2017	"On-site training for Scanning Electron Microscope and Focused Ion Beam (FIB-SEM)", organizzato da Thermo Fisher Scientific presso la facility di microscopia dell'Istituto di Biochimica delle Proteine, Napoli. (days: 3 of 10 completed)
Gennaio 2016	Corso di Formazione "La gestione dei Rifiuti" organizzato dal Servizio di Prevenzione e Protezione presso Area della Ricerca Napoli 1.
Ottobre 2015	2 nd Workshop "State-of-art 3D imaging Transmission Electron Microscope (TEM) and Scanning Electron Microscope (SEM) techniques" organizzato IFOM, Milano.
Settembre 2015	Corso pratico di "Microscopia correlativa", organizzato da Electron Microscopy core facility presso European Molecular Biology Laboratory (EMBL), Heidelberg (Germania).
Maggio 2015	Corso di "Primo soccorso (corso di richiamo)" organizzato dal servizio prevenzione e protezione presso Area di Ricerca Napoli 1.
Maggio 2014	On-Site training for Transmission Electron Microscope and tomo apparatus on Tecnai 12 Spirit, organizzato da FEI Europe presso la Facility di microscopia dell'Istituto di Biochimica delle Proteine, Napoli.
Gennaio 2013	Corso di "Introduzione alla qualità in laboratorio – L'approccio alle Good Laboratory Practice (GLP)" organizzato da Valore Qualità e Associazione Nazionale Biotecnologi Italiani (ANBI), Milano.
Settembre 2012	Corso di Formazione "Il Corso Teorico-Pratico di Ultramicrotomia e Crioultramicrotomia" organizzato da Fondazione Filarete, Milano.
Febbraio 2012	Corso di formazione: "Corso antincendio a rischio elevato", organizzato dal CNR, presso Area della Ricerca Napoli 1.
Gennaio 2012	On-Site training for Transmission Electron Microscope, organizzato da FEI Europe presso la Facility di microscopia dell'Istituto di Biochimica delle Proteine, Napoli
Ottobre 2011	Corso di formazione: "Nuove tecnologie per la preparazione di campioni biologici per la microscopia elettronica" organizzato da Microcontrol n.t.,

	presso Area di Ricerca Napoli 1.
Ottobre 2011	Corso di formazione: "La qualità nelle scienze per la vita – project management" organizzato da Valore Qualità e CNR, presso Area di Ricerca Napoli 1.
Settembre 2011	Corso di formazione: "La qualità nelle scienze per la vita – corso base" organizzato da Valore Qualità e CNR, presso Area di Ricerca Napoli 1.
Maggio 2011	Corso di: "Primo soccorso" organizzato da ufficio prevenzione e protezione, presso Area di Ricerca Napoli 1.
Aprile 2011	Corso di formazione: "Prevenzione nei luoghi di lavoro – conoscenze generali" organizzato dal CNR, presso Area di Ricerca Napoli 1.
Novembre 2010	Corso di formazione: "Addetto antincendio a rischio medio", organizzato da CNR, presso Area di Ricerca Napoli 1.
Giugno 2007	Corso di formazione: "Addetto antincendio a rischio medio", organizzato da Consorzio Mario Negri Sud, Santa Maria Imbaro, Chieti.
Luglio 2006	Corso di formazione: "Tecniche di micromanipolazione con Eppendorf Injectman NI2", organizzato da Eppendorf Italia presso il Consorzio Mario Negri Sud, Santa Maria Imbaro, (Chieti).
Ottobre 2000	Corso di: "Sistemi di pipettaggio manuali Gilson", organizzato da Gilson Italia presso il Consorzio Mario Negri Sud, Santa Maria Imbaro, (Chieti).
Gennaio 2002	Corso di: "Microscopia Elettronica a trasmissione di base ed avanzata", organizzato da FEI Company, presso il Consorzio Mario Negri Sud, Santa Maria Imbaro, (Chieti)
Aprile 1997	Corso di "Radioisotopi nella ricerca Biomedica" presso il Consorzio Mario Negri Sud di Santa Maria Imbaro (Chieti).
Novembre 2003	Corso di Formazione sul "Rischio Biologico" per Operatori Sanitari organizzato dalla regione Abruzzo ASL Lanciano-Vasto presso il Consorzio Mario Negri Sud, Santa Maria Imbaro (Chieti).
Lug 1996-Feb 1997	Corso di Formazione per "Tecnico di Laboratorio dell'Industria Farmaceutica", della durata complessiva di 1.000 ore, approvato dalla Regione Abruzzo con delibera G.R. n. 463 del 16/02/1996, gestito dal Consorzio Mario Negri Sud di Santa Maria Imbaro (Chieti).

ALTRE INFORMAZIONI

Attività didattica

Mar 2013–Dic 2014	Svolgimento di n°4 ore di attività didattica sul progetto di formazione PONA3_00025 – "Ricerca e competitività 2007-2013" dal titolo: <i>Rafforzamento di capitale umano altamente qualificato nell'impiego e nella valorizzazione di infrastrutture e grandi attrezzature di ricerca per lo studio della biodiversità.</i> La docenza è stata svolta nell'ambito della seguente competenza: <i>Tecnologie di microscopia e bioimaging (Approfondimento conoscenze specialistiche in: Microscopia elettronica in trasmissione: principi e tecniche).</i>
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Riconoscimenti scientifici, Vincite di procedure selettive

2017	Vincitore del Bando di selezione n. 367.117 DSB IBP CTER, assunzione con contratto a tempo indeterminato - Profilo di Collaboratore Tecnico Enti di Ricerca – VI livello professionale.
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2012	Riconoscimento per la pubblicazione: Valente et al., <i>Nat. Cell Biol.</i> (2012) 4:343-54. 1) La Faculty of 1000 (F1000) che identifica gli articoli scientifici più importanti in campo medico e biologico lo ha classificato nel 2% superiore dei lavori pubblicati in medicina e biologia nell'anno 2012. 2) Nel corso della giornata AIRC presso il Quirinale (9.11.2012) questo lavoro è stato definito "al top della ricerca" (tra i primi dieci) finanziati da AIRC. 3) Selezionato tra gli highlights 2011-2012 del CNR.
2011	Riconoscimento per la pubblicazione: Yang JS, <u>Valente et al.</u> , <i>Nat. Cell Biol.</i> (2011) 8:996-1003. Selezionato tra gli highlights 2011-2012 del CNR.
2010	Vincitore del Bando di selezione n. IBP/126.33.CTD.01/2010 per il profilo di Collaboratore Tecnico Enti di Ricerca – VI livello professionale.

Partecipazione a Progetti di Ricerca

Titolo : "POLIFARMA, Sistemi POLImerici micro e nano-particellari per la somministrazione di molecole FARMacologicamente attive".

PON02_00029_3203241

Ente/Istituzione finanziatrice: MIUR

Ruolo svolto: Studi di microscopia confocale

Importo totale finanziamento: 4.590.119,00 €

Periodo di attività dal: 01/07/2012 al: 30/06/2015

n. protocollo: 0001045 data: 07/03/2013

Titolo: "Antigeni e Adjuvanti per Vaccini e Immunoterapia".

PON01_00117

Ente/Istituzione finanziatrice: MIUR

Ruolo svolto: Studi morfologici mediante microscopia confocale ed elettronica.

Importo totale finanziamento: 17.361.674,00 €

Periodo di attività dal: 01/07/2011 al: 30/10/2014

Titolo: "Una piattaforma tecnologica integrata per lo sviluppo di nuovi farmaci per malattie rare". PON01_00862

Ente/Istituzione finanziatrice: MIUR

Ruolo svolto: Identificazione di "drugable" targets rilevanti nel trattamento della fibrosi cistica.

Importo totale finanziamento: 17.243.712,35 €

Periodo di attività dal: 01/07/2011 al: 31/12/2015

n. protocollo: 0003325 data: 22/12/2011

Titolo: "Peptidi da NGF quali farmaci innovativi delle malattie neurodegenerative periferiche". PON FIT E01/000795/02/X 17

Ente/Istituzione finanziatrice: MISE

Ruolo svolto: Contributo tecnico scientifico alla messa a punto di nuove tecnologie di High Content Screening (HCS).

Importo totale finanziamento: 1.916.100,00 €

Periodo di attività dal: 01/01/2010 al: 30/12/2013

Titolo: Rafforzamento di capitale umano altamente qualificato nell'impiego e nella valorizzazione di infrastrutture e grandi attrezzature di ricerca per lo studio della biodiversità". PONa3_00025

Ente/Istituzione finanziatrice: MIUR

Ruolo svolto: Attività didattica frontale erogata in parte con metodologie di didattica tradizionali e in parte attraverso strumenti di e-Learning.

Importo totale finanziamento: 13.400.000,00 €

Periodo di attività dal: 01/01/2012 al: 10/07/2015

**Incarichi di responsabilità
e/o di coordinamento di attività
tecnico-scientifiche**

Tipologia incarico: Responsabile del funzionamento e gestione del servizio di microiniezione.

Denominazione Struttura: Istituto di Biochimica delle Proteine - CNR

Durata incarico dal: 31/10/2018 al: Ancora in corso

Riferimenti o n. protocollo: 0004933 data: 31/10/2018

Tipologia incarico: Responsabile del funzionamento e gestione del servizio di microscopia elettronica e scansione e Focused Ion Beam (FIB-SEM).

Denominazione Struttura: Istituto di Biochimica delle Proteine - CNR

Durata incarico dal: 31/10/2018 al: Ancora in corso

Riferimenti o n. protocollo: 0004932 data: 31/10/2018

Tipologia incarico: Direttore dei lavori per l' Allestimento del sistema di microscopia elettronica a scansione FIB-SEM da installare presso la facility di microscopia dell' IBP.

Denominazione Struttura: Istituto di Biochimica delle Proteine - CNR

Durata incarico dal: 31/10/2018 al: 31/12/2018

Riferimenti o n. protocollo: 0004931 data: 31/10/2018

Tipologia incarico: Direttore dei lavori per l' Allestimento di un sistema di monitoraggio del prelievo di azoto liquido a servizio dei laboratori dell' IBP.

Denominazione Struttura: Istituto di Biochimica delle Proteine - CNR

Durata incarico dal: 31/10/2018 al: 31/11/2018

Riferimenti o n. protocollo: 0004930 data: 31/10/2018

Tipologia incarico: Allestimento di un sistema di microiniezione a servizio della facility di microscopia e dei laboratori dell'Istituto.

Denominazione Struttura: Istituto di Biochimica delle Proteine - CNR

Durata incarico dal: 31/10/2018 al: 31/12/2018

Riferimenti o n. protocollo: 0004929 data: 31/10/2018

Tipologia incarico: Coordinatore incaricato della corretta gestione dei rifiuti radioattivi.

Denominazione Struttura: Istituto di Biochimica delle Proteine - CNR

Durata incarico dal: 09/03/2016 al: Ancora in corso

Riferimenti o n. protocollo: 0000587 data: 09/03/2016

Tipologia incarico: Responsabile del funzionamento della Facility di Microscopia Ottica ed Elettronica a Trasmissione, Ultramicrotomo e Ultracriomicrotomo.

Denominazione Struttura: Istituto di Biochimica delle Proteine - CNR

Sede Struttura: Via Pietro Castellino, 111 – 80131 Napoli

Durata incarico dal: 17/06/2015 al: Ancora in corso

Riferimenti o n. protocollo: 0002062 data: 17/06/2015

Tipologia incarico: Gestione dei rifiuti radioattivi e controllo delle contaminazioni per la sede dell'IBP.

Denominazione Struttura: Istituto di Biochimica delle Proteine - CNR

Sede Struttura: Via Pietro Castellino, 111 – 80131 Napoli

Durata incarico dal: 10/01/2013 al: 08/03/2016

Riferimenti o n. protocollo: 0002062 data: 10/01/2013

Tipologia incarico: Progettazione ed allestimento della Facility di Microscopia Elettronica.

Denominazione Struttura: Fondazione Telethon

Sede Struttura: c/o IBP - TIGEM, Via Pietro Castellino, 111 – 80131 Napoli

Durata incarico dal: 07/05/2012 al: 30/09/2012

Riferimenti o n. protocollo: TALP61TELC data: 07/05/2012

Altre informazioni:

Tipologia incarico: Direttore dei lavori per la realizzazione di un impianto di distribuzione gas puri.
Denominazione Struttura: Istituto di Biochimica delle Proteine - CNR
Sede Struttura: Via Pietro Castellino, 111 – 80131 Napoli
Durata incarico dal: 06/10/2011 al: 16/10/2011
Riferimenti o n. protocollo: 0002461 data: 06/10/2011

Tipologia incarico: Progettazione tecnica per apparecchiature e metodologia per lo sviluppo del bioimaging avanzato.
Denominazione Struttura: Fondazione Telethon
Sede Struttura: c/o IBP - TIGEM, Via Pietro Castellino, 111 – 80131 Napoli
Durata incarico dal: 15/04/2011 al: 30/07/2011
Riferimenti o n. protocollo: TADP73AIRZ (ovh) data: 15/04/2011

Tipologia incarico: Progettazione ed allestimento della Facility per Ultramicrotomia.
Denominazione Struttura: Fondazione Telethon
Sede Struttura: c/o IBP - TIGEM, Via Pietro Castellino, 111 – 80131 Napoli
Durata incarico dal: 19/05/2010 al: 30/06/2010
Riferimenti o n. protocollo: TALP61EFPA data: 19/05/2010

Tipologia incarico: Allestimento e gestione del servizio di microiniezione.
Denominazione Struttura: Fondazione Telethon
Sede Struttura: c/o IBP - TIGEM, Via Pietro Castellino, 111 – 80131 Napoli
Durata incarico dal: 19/11/2009 al: 20/12/2009
Riferimenti o n. protocollo: TALP61EFPA data: 19/11/2009

Partecipazione a commissioni Tecnico-Scientifiche e di Collaudo

Tipologia incarico: Membro di commissione di collaudo di un Microscopio Elettronico e Ionico a doppio fascio, modello Scios, FEI.
Organismo: Istituto di Biochimica delle Proteine – CNR, Napoli
Ruolo svolto: Membro di commissione
Periodo di attività dal: 30/11/2015 al: 30/11/2015

Tipologia incarico: Membro di commissione di collaudo di:
a) Sistema di Microdissezione Laser LMD6
b) UPLC con DYODE ARRAY
c) Spinning disk Microscope
d) Mass imaging instrument
e) Mass spectrometry instruments
f) Light scattering instrument
Organismo: Istituto di Biochimica delle Proteine – CNR, Napoli
Ruolo svolto: Membro di commissione
Giorno di collaudo: a) 11/11/2015; b) 10/11/15; c) 13/11/2015; d) 18/11/2015; e) 20/11/2015; f) 17/11/2015.

Tipologia incarico: Presidente di commissione tecnica preposta alla valutazione delle offerte di gara, per l'acquisizione di n°1 Microscopio Invertito per colture cellulari.
Organismo: Istituto di Biochimica delle Proteine – CNR, Napoli
Ruolo svolto: Presidente di commissione
Periodo di attività dal: 21/05/2014 al: 21/05/2014

Tipologia incarico: Membro di commissione tecnica preposta alla valutazione delle offerte di gara per:
a) espletamento della sorveglianza fisica secondo il DLgs 230/95 e smi;
b) compito di RSPP per il rischio radiologico;
c) espletamento dei compiti della figura di tecnico laser.
Organismo: Istituto di Biochimica delle Proteine – CNR, Napoli
Ruolo svolto: Membro di commissione
Periodo di attività dal: 25/10/2013 al: 25/10/2013

Tipologia incarico: Membro di commissione tecnica preposta alla valutazione delle offerte di gara, per la realizzazione di impianti elettrici, di condizionamento e impianto controllo accessi per l'allestimento del laboratorio di microscopia al piano interrato.

Organismo: Istituto di Biochimica delle Proteine – CNR, Napoli

Ruolo svolto: Membro di commissione

Periodo di attività dal: 06/03/2013 al: 06/03/2013

Tipologia incarico: Membro di commissione tecnica preposta alla valutazione delle offerte di gara, per l'acquisizione di un Microscopio rovesciato spettrale a scansione laser.

Organismo: Istituto di Biochimica delle Proteine – CNR, Napoli

Ruolo svolto: Membro di commissione

Periodo di attività dal: 04/02/2013 al: 04/02/2013

Tipologia incarico: Membro di commissione tecnica preposta alla valutazione delle offerte di gara, per lavori di manutenzione straordinaria al piano interrato per il laboratorio di microscopia.

Organismo: Istituto di Biochimica delle Proteine – CNR, Napoli

Ruolo svolto: Membro di commissione

Periodo di attività dal: 20/12/2012 al: 20/12/2012

Tipologia incarico: Presidente di commissione tecnica preposta alla valutazione delle offerte di gara, l'acquisizione di due Termociclatori quantitativi di tipo Real-Time (96well) e cinque Termociclatori di tipo standard (96well).

Organismo: Istituto di Biochimica delle Proteine – CNR, Napoli

Ruolo svolto: Presidente di commissione

Periodo di attività dal: 11/12/2012 al: 11/12/2012

Tipologia incarico: Membro di commissione tecnica preposta alla valutazione delle offerte di gara, l'acquisizione di un Citofluorimetro analizzatore da banco.

Organismo: Istituto di Biochimica delle Proteine – CNR, Napoli

Ruolo svolto: Membro di commissione

Periodo di attività dal: 28/09/2012 al: 28/09/2012

Tipologia incarico: Presidente di commissione tecnica preposta alla valutazione delle offerte di gara, per l'acquisizione di n°1 Ultracentrifuga da pavimento provvista di n°4 rotori e di n°1 Ultracentrifuga da banco provvista di n°2 rotori.

Organismo: Istituto di Biochimica delle Proteine – CNR, Napoli

Ruolo svolto: Presidente di commissione

Periodo di attività dal: 22/06/2012 al: 22/06/2012

CAPACITÀ E COMPETENZE

TECNICHE

Tecniche di colture cellulari e di trasfezione.

Tecniche di microiniezione.

Tecniche di "immunostaining".

Tecniche di frazionamento cellulare per ultracentrifugazione.

Tecniche immunochimiche; preparazione di anticorpi policlonali da coniglio e purificazione degli anticorpi policlonali attraverso cromatografia per affinità.

Principali tecniche di manipolazione degli Acidi nucleici: Clonaggio, Amplificazione per PCR.

Tecniche di estrazione e purificazione del DNA, elettroforesi su gel d'agarosio.

Tecniche di purificazione di proteine espresse in batteri: trasformazioni di batteri, purificazione di proteine legate a tag (His, GST).

Abilitazione all'uso di sostanze radioattive.

Tecniche elettroforetiche: Elettroforesi su gel di poliacrilammide mono e bidimensionale, Elettroforesi in condizioni native, Gel in gradiente, "Western-blotting" di proteine.

Tecniche cromatografiche: Cromatografia su strato sottile (TLC).

Uso del Microscopio Ottico, uso del Microscopio a Fluorescenza e Confocalità.

Uso del Microscopio Confocale ad alta velocità (Spinnig disk).

Uso della piattaforma di High Content Screening a Fluorescenza (Scan-R).

Tecniche di immunofluorescenza in cellule di mammifero fissate ed in vivo.

Tecniche di Microscopia Elettronica, preparazione di campioni per studi ed analisi di morfologia cellulare:

Immunomarcature per microscopia elettronica a trasmissione.
Marcatura con OsO₄ e acetato di uranile.
Preparazione dei campioni cellulari per Negative staining.
Inclusione dei campioni in resina epossidica.
Correlative light-electron microscopy (CLEM).
Cryo-section con metodo Tokuyasu.
Taglio dei campioni tramite ultramicrotomo e cryo-ultramicrotomo.
Acquisizioni e ricostruzioni Tomografiche di campioni biologici.
Focused Ion Beam in microscopia a scansione (FIB-SEM).

CAPACITÀ E COMPETENZE PERSONALI

Ottime capacità relazionali e facilità nell'instaurare rapporti interpersonali. Capacità di organizzazione del lavoro di laboratorio e del suo svolgimento. Incarichi di componente di commissione tecnico gestionale.

CAPACITÀ E COMPETENZE INFORMATICHE

Sistemi operativi	Buona conoscenza ambienti Mac OS e Windows
Office Automation	Buona conoscenza applicazioni: Pacchetto Office, Xplore 3D, TEM Tomography per acquisizioni ed elaborazione tomografiche, iMOD per ricostruzioni tomografiche.
Internet	Buona conoscenza

CAPACITÀ E COMPETENZE LINGUISTICHE

Madre lingua/e	Italiano
Altra/e lingua/e	Inglese
Capacità di lettura:	Pre-intermediate
Capacità di scrittura:	Pre-intermediate

PUBBLICAZIONI

1. Phosphoproteomics of CD2 signaling reveals AMPK-dependent regulation of lytic granule polarization in cytotoxic T cells.
Zurli V, Montecchi T, Heilig R, Poschke I, Volkmar M, Wimmer G, Boncompagni G, **Turacchio G**, D'Elia MM, Campoccia G, Resta N, Offringa R, Fischer R, Acuto O, Baldari CT, Kabanova A.
Sci Signal. 2020 May 12;13(631):eaaz1965. doi: 10.1126/scisignal.aaz1965.
PMID: 32398348
2. GRASP55 and UPR Control Interleukin-1 β Aggregation and Secretion.
Chiritoiu M, Brouwers N, **Turacchio G**, Pirozzi M, Malhotra V.
Dev Cell. 2019 Apr 8;49(1):145-155.e4. doi: 10.1016/j.devcel.2019.02.011. Epub 2019 Mar 14.
PMID: 30880003
3. Auto-regulation of Secretory Flux by Sensing and Responding to the Folded Cargo Protein Load in the Endoplasmic Reticulum.
Subramanian A, Capalbo A, Iyengar NR, Rizzo R, di Campi A, Di Martino R, Lo Monte M, Beccari AR, Yerudkar A, Del Vecchio C, Glielmo L, **Turacchio G**, Pirozzi M, Kim SG, Henklein P, Cancino J, Parashuraman S, Diviani D, Fanelli F, Salles M, Luini A.

Cell. 2019 Mar 7;176(6):1461-1476.e23. doi: 10.1016/j.cell.2019.01.035.
PMID: 30849374

4. PARP1-produced poly-ADP-ribose causes the PARP12 translocation to stress granules and impairment of Golgi complex functions.

Catara G, Grimaldi G, Schembri L, Spano D, **Turacchio G**, Lo Monte M, Beccari AR, Valente C, Corda D.

Sci Rep. 2017 Oct 25;7(1):14035. doi: 10.1038/s41598-017-14156-8.
PMID: 29070863

5. Sphingomyelin metabolism controls the shape and function of the Golgi cisternae.

Campelo F, van Galen J, **Turacchio G**, Parashuraman S, Kozlov MM, García-Parajo MF, Malhotra V.

Elife. 2017 May 13;6. pii: e24603. doi: 10.7554/eLife.24603.
PMID: 28500756

6. Sphingolipid metabolic flow controls phosphoinositide turnover at the *trans*-Golgi network.

Capasso S, Sticco L, Rizzo R, Pirozzi M, Russo D, Dathan NA, Campelo F, van Galen J, Hölttä-Vuori M, **Turacchio G**, Hausser A, Malhotra V, Riezman I, Riezman H, Ikonen E, Luberto C, Parashuraman S, Luini A, D'Angelo G.

EMBO J. 2017 Jun 14;36(12):1736-1754. doi: 10.15252/embj.201696048. Epub 2017 May 10.
PMID: 28495678

7. On the role of Mitofusin 2 in endoplasmic reticulum-mitochondria tethering.

Filadi R, Greotti E, **Turacchio G**, Luini A, Pozzan T, Pizzo P.

Proc Natl Acad Sci U S A. 2017 Mar 21;114(12):E2266-E2267. doi: 10.1073/pnas.1616040114. Epub 2017 Mar 13. No abstract available.

PMID: 28289206

8. Divergent in vitro/in vivo responses to drug treatments of highly aggressive NIH-Ras cancer cells: a PET imaging and metabolomics-mass-spectrometry study.

Gaglio D, Valtorta S, Ripamonti M, Bonanomi M, Damiani C, Todde S, Negri AS, Sanvito F, Mastroianni F, Di Campi A, **Turacchio G**, Di Grigoli G, Belloli S, Luini A, Gilardi MC, Colangelo AM, Alberghina L, Moresco RM.

Oncotarget. 2016 Jul 7. doi: 10.18632/oncotarget.10470
PMID: 27409831

9. Golgi membrane fission requires the CtBP1-S/BARS-induced activation of lysophosphatidic acid acyltransferase δ .

Pagliuso A, Valente C, Giordano LL, Filograna A, Li G, Circolo D, **Turacchio G**, Marzullo VM, Mandrich L, Zhukovsky MA, Formiggini F, Polishchuk RS, Corda D, Luini A.

Nat Commun. 2016 Jul 12;7:12148. doi: 10.1038/ncomms12148.
PMID: 27401954

10. Presenilin 2 Modulates Endoplasmic Reticulum-Mitochondria Coupling by Tuning the Antagonistic Effect of Mitofusin 2.

Filadi R, Greotti E, **Turacchio G**, Luini A, Pozzan T, Pizzo P.

Cell Rep. 2016 Jun 7;15(10):2226-38. doi: 10.1016/j.celrep.2016.05.013. Epub 2016 May 26.
PMID: 27239030

11. ESCRT-III drives the final stages of CUPS maturation for unconventional protein secretion.

Curwin AJ, Brouwers N, Alonso Y Adell M, Teis D, **Turacchio G**, Parashuraman S, Ronchi P, Malhotra V.

Elife. 2016 Apr 26;5. pii: e16299. doi: 10.7554/eLife.16299.
PMID: 27115345

12. Mitofusin 2 ablation increases endoplasmic reticulum-mitochondria coupling.

Filadi R, Greotti E, **Turacchio G**, Luini A, Pozzan T, Pizzo P.

Proc Natl Acad Sci U S A. 2015 Apr 28;112(17):E2174-81. doi: 10.1073/pnas.1504880112. Epub 2015 Apr 13.
PMID: 25870285

13. A 14-3-3 γ dimer-based scaffold bridges CtBP1-S/BARS to PI(4)KIII β to regulate post-Golgi carrier formation.

Valente C, **Turacchio G**, Mariggì S, Pagliuso A, Gaibisso R, Di Tullio G, Santoro M,

Formiggini F, Spanò S, Piccini D, Polishchuk RS, Colanzi A, Luini A, Corda D.
Nat Cell Biol. 2012 Feb 26;14(4):343-54. doi: 10.1038/ncb2445.
PMID: 22366688

14. COPI acts in both vesicular and tubular transport.

Yang JS, Valente C, Polishchuk RS, **Turacchio G**, Layre E, Moody DB, Leslie CC, Gelb MH, Brown WJ, Corda D, Luini A, Hsu VW.
Nat Cell Biol. 2011 Jul 3;13(8):996-1003. doi: 10.1038/ncb2273.
PMID: 21725317

15. ARFGAP1 promotes AP-2-dependent endocytosis.

Bai M, Gad H, **Turacchio G***, Cocucci E, Yang JS, Li J, Beznoussenko GV, Nie Z, Luo R, Fu L, Collawn JF, Kirchhausen T, Luini A, Hsu VW.
Nat Cell Biol. 2011 May;13(5):559-67. doi: 10.1038/ncb2221. Epub 2011 Apr 17.
PMID: 21499258

*** First Author**

16. A role for phosphatidic acid in COPI vesicle fission yields insights into Golgi maintenance.

Yang JS, Gad H, Lee SY, Mironov A, Zhang L, Beznoussenko GV, Valente C, **Turacchio G**, Bonsra AN, Du G, Baldanzi G, Graziani A, Bourgoïn S, Frohman MA, Luini A, Hsu VW.
Nat Cell Biol. 2008 Oct;10(10):1146-53. doi: 10.1038/ncb1774. Epub 2008 Sep 7.
PMID: 18776900

17. ARAP1 regulates EGF receptor trafficking and signalling.

Daniele T, Di Tullio G, Santoro M, **Turacchio G**, De Matteis MA.
Traffic. 2008 Dec;9(12):2221-35. doi: 10.1111/j.1600-0854.2008.00823.x. Epub 2008 Aug 25.
PMID: 18764928

18. A traffic-activated Golgi-based signalling circuit coordinates the secretory pathway.

Pulvirenti T, Giannotta M, Capestrano M, Capitani M, Pisanu A, Polishchuk RS, San Pietro E, Beznoussenko GV, Mironov AA, **Turacchio G**, Hsu VW, Sallese M, Luini A.
Nat Cell Biol. 2008 Aug;10(8):912-22. doi: 10.1038/ncb1751. Epub 2008 Jul 20.
PMID: 18641641

19. The closure of Pak1-dependent macropinosomes requires the phosphorylation of CtBP1/BARS.

Liberali P, Kakkonen E, **Turacchio G**, Valente C, Spaar A, Perinetti G, Böckmann RA, Corda D, Colanzi A, Marjomaki V, Luini A.
EMBO J. 2008 Apr 9;27(7):970-81. doi: 10.1038/emboj.2008.59. Epub 2008 Mar 20.
PMID: 18354494

20. The Golgi mitotic checkpoint is controlled by BARS-dependent fission of the Golgi ribbon into separate stacks in G2.

Colanzi A, Hidalgo Carcedo C, Persico A, Cericola C, **Turacchio G**, Bonazzi M, Luini A, Corda D.
EMBO J. 2007 May 16;26(10):2465-76. Epub 2007 Apr 12.
PMID: 17431394

21. CtBP3/BARS drives membrane fission in dynamin-independent transport pathways.

Bonazzi M, Spanò S, **Turacchio G**, Cericola C, Valente C, Colanzi A, Kweon HS, Hsu VW, Polishchuk EV, Polishchuk RS, Sallese M, Pulvirenti T, Corda D, Luini A.
Nat Cell Biol. 2005 Jun;7(6):570-80. Epub 2005 May 8.
PMID: 15880102

22. Mitotic Golgi partitioning is driven by the membrane-fissioning protein CtBP3/BARS.

Hidalgo Carcedo C, Bonazzi M, Spanò S, **Turacchio G**, Colanzi A, Luini A, Corda D.
Science. 2004 Jul 2;305(5680):93-6.
PMID: 15232108

23. CtBP/BARS induces fission of Golgi membranes by acylating lysophosphatidic acid.

Weigert R, Silletta MG, Spanò S, **Turacchio G**, Cericola C, Colanzi A, Senatore S, Mancini R, Polishchuk EV, Salmons M, Facchiano F, Burger KN, Mironov A, Luini A, Corda D.
Nature. 1999 Nov 25;402(6760):429-33.
PMID: 10586885

ABSTRACT IN CONGRESSI
NAZIONALI **ED**
INTERNAZIONALI

- Settembre 2016 Valente C, De Tito S, Filograna A, **Turacchio G**, Circolo D, Zhukovsky MA, Luini A, Corda D. Molecular mechanisms of Golgi membrane fission. FEBS Advanced Course on "Lipid-protein interactions and organelle function", Spetzes, Grecia, Settembre 2016.
- Settembre 2016 De Tito S, Sot Sanz J, Valente C, **Turacchio G**, Goni FM, Luini A, Corda D. FEBS Advanced Course on "Lipid-protein interactions and organelle function", Spetzes, Grecia, Settembre 2016.
- Maggio 2016 Valente C, De Tito S, Filograna A, **Turacchio G**, Circolo D, Zhukovsky MA, Luini A, Corda D. Molecular mechanisms of Golgi membrane fission. ABCD Meeting "Organelle Biogenesis and Signal Transduction", Torino, Italia, Maggio 2016.
- Novembre 2014 Valente C, Pagliuso A, Giordano LL, **Turacchio G**, Circolo D, Corda D, Luini A. Molecular mechanisms of post-Golgi tubular carrier formation. Conference Jacques Monod: "Molecular basis for membrane remodelling and organization", Roscoff, Francia, Novembre 2014.
- Giugno 2014 Valente C, Pagliuso A, Giordano LL, **Turacchio G**, Circolo D, Corda D, Luini A. Molecular mechanisms of post-Golgi tubular carrier formation. EMBO Workshop "Cellular imaging of Lipids", Vico Equense, Italia, Giugno 2014.
- Aprile 2014 Valente C, Pagliuso A, Giordano LL, **Turacchio G**, Circolo D, Corda D, Luini A. Molecular mechanisms of post-Golgi tubular carrier formation. "Membrane Trafficking and Organelle Biogenesis", Pesaro, Italia, Aprile 2014.
- Gennaio 2014 Valente C, Pagliuso A, Giordano LL, **Turacchio G**, Circolo D, Corda D, Luini A. Lysophosphatidic acid acyltransferases 4 (LPAAT4) is activated by CtBP1/BARS and drives membrane fission during the formation of post-Golgi basolateral carriers. 9th EMBO-Annaberg Conference: "Protein and lipid function in secretion and endocytosis", Goldegg am See, Austria, Gennaio 2014.
- Settembre 2013 Valente C, Pagliuso A, Giordano LL, **Turacchio G**, Circolo D, Corda D, Luini A. Lysophosphatidic acid acyltransferases 4 (LPAAT4) is activated by CtBP1/BARS and drives membrane fission during the formation of post-Golgi basolateral carriers. "Golgi Apparatus Symposium 2013", Bad Ischl, Austria.
- Ottobre 2011 Valente C, **Turacchio G**, Luini A, Corda D. 14-3-3 γ regulates CtBP1-S/BARS-mediated fission of post-Golgi carriers. FEBS Workshop: "Cell Biology and Pharmacology of Mendelian Disorders", Vico Equense, Italia, Ottobre 2011.
- Settembre 2011 Pagliuso A, Valente C, **Turacchio G**, Corda D, Luini A. Lysophosphatidate acyl transferase (LPAAT) enzymes regulate Golgi trafficking. Conférences Jacques-Monod "Molecular basis for membrane remodelling and organization", Roscoff (Francia), Settembre 2011.
- Settembre 2011 Valente C, **Turacchio G**, Luini A, Corda D. 14-3-3 γ regulates CtBP1-S/BARS-mediated fission of post-Golgi carriers. Conférences Jacques-Monod "Molecular basis for membrane remodelling and organization", Roscoff (Francia), Settembre 2011.
- Settembre 2010 Valente C, **Turacchio G**, Luini A, Corda D. 14-3-3 γ regulates CtBP1-S/BARS-mediated fission of post-Golgi carriers. "The EMBO meeting 2010, advancing the life sciences", Barcellona (Spagna), Settembre 2010
- Settembre 2009 Valente C, **Turacchio G**, Colanzi A, Luini A, Corda D. 14-3-3 γ regulates CtBP1-S/BARS-mediated fission of post-Golgi carriers. FEBS Advanced

- Course on "Lipid signalling and disease", Ortona (Italia), Settembre 2009.
- Settembre 2009 Pagliuso A, Valente C, Li G, Corda D, and Luini A. Molecular mechanism of the CtBP1/BARS-dependent fission process. FEBS Advanced Course on "Lipid signalling and disease", Ortona (Italia), Settembre 2009.
- Luglio 2009 Valente C, **Turacchio G**, Colanzi A, Luini A, Corda D. 14-3-3 γ regulates CtBP1-S/BARS-mediated fission of post-Golgi carriers. 34th FEBS Congress: "Life's Molecular Interactions", Praga (Repubblica Ceca), Luglio 2009.
- Luglio 2009 Grimaldi G, Colanzi A, Cericola C, Valente C, **Turacchio G**, Luini A, and Corda D. A novel enzymatic mechanism in the ADP-ribosylation of CtBP1/BARS. 34th FEBS Congress: "Life's Molecular Interactions", Praga (Repubblica Ceca), Luglio 2009.
- Novembre 2008 Grimaldi G, Colanzi A, Valente C, **Turacchio G**, Cericola C, Luini A, and Corda D. Identification of the enzymes and mechanisms involved in the ADP-ribosylation of the CtBP1/BARS proteins "XXI Meeting sull' ADP-Ribosilazione", Lanciano (Italia), Novembre 2008.
- Settembre 2008 Colanzi A, Cericola C, Valente C, **Turacchio G**, Luini A, and Corda D. CtBP/BARS proteins are ADP-ribosylated by a novel mechanism. The 2008 Golgi Meeting: " Membrane trafficking in global cellular responses", Pavia (Italia), Settembre 2008.
- Settembre 2008 Valente C, **Turacchio G**, Colanzi A, Luini A. and Corda D. 14-3-3 γ regulates CtBP1/BARS mediated fission of post-Golgi carriers. The 2008 Golgi meeting: "Membrane trafficking in global cellular responses", Pavia (Italia), Settembre 2008.
- Giugno 2008 Valente C, **Turacchio G**, Colanzi A, Luini A. and Corda D. 14-3-3 γ regulates CtBP1/BARS mediated fission of post-Golgi carriers. 33th FEBS Congress 11th: "Biochemistry of Cell Regulation", Atene (Grecia), Giugno 2008.
- Giugno 2008 Valente C, **Turacchio G**, Colanzi A, Luini A. and Corda D. 14-3-3 γ regulates CtBP1/BARS mediated fission of post-Golgi carriers. 8thFEBS Young Scientist Forum -YSF2008 "Cell Harmony"- Loutraki (Grecia), Giugno 2008.
- Giugno 2007 Valente C, Spanò S, **Turacchio G**, Colanzi A, Luini A. and Corda D. Role of the proteins BARS, PI4KIII β and 14-3-3 γ in the formation of post-Golgi carriers. FEBS Advanced Course on "Lipid signalling pathways: from cell biology to novel drug targets", Ortona (Italia), Giugno 2007.
- Maggio 2007 Valente C, Spanò S, **Turacchio G**, Colanzi A, Luini A. and Corda D. Role of CtBP3/ BARS and 14-3-3 γ in the formation of post-Golgi carriers. "1th MRC LMCB&CUB University College London and DCBO CMNS, PhD Student Conference", Guardigliare (Italia) Maggio 2007.
- Maggio 2007 Valente C, Spanò S, **Turacchio G**, Colanzi A, Luini A. and Corda D. Role of the BARS and 14-3-3 γ in the formation of post-Golgi carriers. "Membrane Traffic in the secretory pathway", Goldegg (Austria) Gennaio 2007.
- Settembre 2005 Valente C, Spanò S, **Turacchio G**, Colanzi A, Luini A. and Corda D. Identification of BARS-interacting proteins and their functional roles in membrane transport. "7th Young Scientists Meeting of the German Society for Cell Biology", Jena (Germania) Settembre 2005.

SEGUENTI LABORATORI

Dr. Tullio Pozzan, Department of Biomedical Sciences, Università di Padova (Italia).
Dr. Cesare Montecucco, Dipartimento di scienze biomediche, Padova (Italia).
Dr. Alexander Mironov, IFOM-IEO Campus, Milano (Italia).
Dr. Roman Polishchuk, TIGEM, Pozzuoli (Italia).
Dr. Gianfranco Peluso, Institute of Biosciences and Bioresources – CNR, Napoli (Italia).
Dr. Félix M. Goñi Joint Center of the Spanish National Research Council (CSIS) and the University of the Basque Country Leioa, (Spain).

TRATTAMENTO DEI DATI PERSONALI, INFORMATIVA E CONSENSO

Il D.Lgs. 30/6/2003, n. 196 “Codice in materia di protezione dei dati personali” regola il trattamento dei dati personali, con particolare riferimento alla riservatezza, all'identità personale e al diritto di protezione dei dati personali; l'interessato deve essere previamente informato del trattamento .

La norma in considerazione intende come “trattamento” qualunque operazione o complesso di operazioni concernenti la raccolta, la registrazione, l'organizzazione, la conservazione, la consultazione, l'elaborazione, la modifica, la selezione, l'estrazione, il raffronto, l'utilizzo, l'interconnessione, il blocco, la comunicazione, la diffusione, la cancellazione e la distruzione di dati, anche se non registrati in una banca dati

In relazione a quanto riportato, autorizzo il CNR al trattamento dei dati contenuti nel presente *curriculum vitae* e nella documentazione della quale fa parte integrante.

(*barrare la casella*) Sì, acconsento

Napoli, 13 Settembre 2021



In fede

Education:

- 1999-2004** **Ph.D.**, in life sciences from **National Institute of Immunology** (Jawaharlal Nehru University), New Delhi, India.
Thesis entitled "Role of *Salmonella* secretory protein SopE in the intracellular trafficking of *Salmonella* in Macrophages".
- 1997-1999** **M.Sc.**, in Biotechnology from **Pondicherry University**, Pondicherry, India.
Thesis titled "Purification and characterization of Taq DNA polymerase"
- 1994-1997** **B.Sc.**, in Zoology with special emphasis on Biotechnology from **Loyola College**, Chennai, India.
Thesis titled "*In vitro* propagation of *Hybanthus enneaspermus*"

Employment:

- 2020-** **Group Leader**, Institute of Biochemistry and Cell Biology, National Research Council, Naples, Italy
- 2020-** **Head**, Microscopy facility, Institute of Biochemistry and Cell Biology, National Research Council, Naples, Italy.
- 2019-2020** **Group Leader**, Institute of Protein Biochemistry, National Research Council, Naples, Italy
- 2019-2020** **Head**, Microscopy facility, Institute of Protein Biochemistry, National Research Council, Naples, Italy.
- 2014-2019** **Senior Researcher**, Institute of Protein Biochemistry, National Research Council, Naples, Italy
- 2014-2019** **Head**, Microscopy facility, Institute of Protein Biochemistry, National Research Council, Naples, Italy.
- 2012-2014** **Researcher**, Institute of Protein Biochemistry, National Research Council, Naples, Italy.
- 2009-2012** **Post-doctoral fellow**, Telethon Institute of Genetics and Medicine, Naples, Italy.
- 2005-2009** **Post-doctoral fellow**, Mario Negrisud Institute, S.Maria Imbaro, Italy.

Teaching experience:

- 2017** PhD coursework lectures, University of Siena, Italy on *Functional cell morphology*
- 2014-** Annual teaching and practical courses on microscopy to graduate students. Institute of Protein Biochemistry, CNR, Naples, Italy.
- 2014** Part of the team providing PhD coursework lectures, CNR, Naples, Italy.

-
- 2018** Lecture on “Fluorescence” to students of the University Luigi Vanvitelli
- 2018** Lecture on “History and future of research on membrane trafficking” to the students on the graduate program of the University Luigi Vanvitelli
- 2019** Lecture on “Advance Imaging methods”, Sastra University, India.
- 2019** Lecture on Functional architecture of the Golgi, Sastra University, India:

Technical expertise:

- 2014- Biochemical techniques to study lipids and glycosylation, CRISPR/Cas9 mediated gene KO
Super resolution microscopy (G-STED), Electron microscopy (tomography, cryo immunogold labeling), spinning disc confocal microscopy, High throughput imaging.
- 2009-2014 Bioinformatic methods to analyze transcriptional profiles, protein-protein interactions and co-expression analysis
- 2005-2009 Confocal microscopy, Electron microscopy, cell biological analysis of membrane trafficking
- 1999-2004 Biochemical analysis of membrane trafficking by in vitro assays, Molecular biology techniques
- 1997-1999 Molecular biology
- 1994-1997 Plant tissue culture techniques

Discoveries and inventions:

My research interests have centered on the cell biology of membrane trafficking, ranging from cellular microbiology studies using *in vitro* assays to studying mammalian secretory pathway functions in physiology and pathology by advanced microscopy and bioinformatic methods.

The key findings from my research are:

- 1.** Molecular organization of the organelles *i.e.* appropriate localization and complex formation of its constituents, determines their proper functioning. We explored this paradigm experimentally using Golgi apparatus as a model system. Golgi apparatus is involved in processing (glycosylation) and sorting of one-third of the human proteome and nearly most of the lipids produced by the cell. We found that molecular machineries that appropriately position glycosylation enzymes in the Golgi influence its processing function. In particular, we have characterized how Grasp55 regulates the appropriate localization in the Golgi of glycosphingolipid biosynthetic enzyme(s) and impacts the proportion of glycosphingolipids produced by the organelle (*Manuscript in preparation*).

2. Identification of novel oncoproteins by analysis of cancer genomics datasets (*Manuscript in preparation*).

3. Golgi apparatus is arranged as a stack of flattened cisternae through which cargoes are transported while being glycosylated. How cargoes (proteins and lipids) traverse the stacked Golgi apparatus, while the residents remain in place has been a long-standing question in cell biology. We provided evidence showing that retention of proteins in the Golgi in the face of membrane flux across the organelle, is mediated by sorting them away from the flux in retrograde transport carriers (*J. Cell Biol 2013*). We also showed that there is more than one transport route across the Golgi and a faster route mediated by diffusion across transient connections between the Golgi cisternae is used by small molecules like albumin and anti-trypsin (*Elife 2014*).

4. Intracellular pathogens survive by diverting intracellular membrane trafficking pathways. We showed *Salmonella* actively regulated its own trafficking inside macrophages by its secretory products thus creating a protective niche where it replicates (*FEBS lett, 2010; J. Biol Chem 2012*).

5. The molecular bases of drug side effects remain unclear in most cases, in spite of their importance. I, along with others, developed and validated a bioinformatic method, based on transcriptional profiling, to identify the molecular mechanisms underlying the drug side effects (*Elife 2015*), like the molecular basis of gastric irritation caused by non-steroidal anti-inflammatory drugs, Ketoprofen and ibuprofen (*J. Cell. Physiol. 2017*).

6. Using this method we also identified signaling pathways that regulate proteostasis of misfolded proteins associated with genetic diseases (Cystic Fibrosis, Wilson's Disease) (*Elife, 2015, Hepatology, 2016*).

Awards:

1. 2015	Christian Boulin Fellowship	EMBL, Germany
2. 2002	Travel grant	CSIR, India
3. 2001-2004	Senior Research Fellowship	CSIR, India
4. 1999-2004	Junior Research Fellowship	CSIR, India
5. 1997-1999	Biotechnology fellowship	DBT, GOI.
6. 1997	Gold medalist in B.Sc.,	Loyola College, India.
7. 1996	Merit Scholarship	Loyola College, India.
8. 1994	School topper in Chemistry, CBSE Class XII examination.	St. John's SS School, India.

Publications:

As Corresponding author:

1. Prathyush Pothukuchi, Ilenia Agliarulo, Marinella Pirozzi, Riccardo Rizzo, Domenico Russo, Gabriele Turacchio, Laura Capolupo, Maria Jose Hernandez-Corbacho, Giovanna Vanacore, Nina Dathan, Petra Henklein, Julian Nüchel, Markus Plomann, Lina M. Obeid, Yusuf A. Hannun, Alberto Luini, Giovanni D'Angelo, **Parashuraman S #**. (2020) Regulated compartmentalization of enzymes in Golgi by GRASP55 controls cellular glycosphingolipid profile and function. **Biorxiv**. <https://doi.org/10.1101/2020.05.03.074682> # denotes correspondence
2. Pothukuchi P, Agliarulo I, Russo D, Rizzo R, Russo F, **Parashuraman S #**. 2019. Translation of genome to glycome: role of the Golgi apparatus. *FEBS Lett* 593(17):2390-2411.
3. Hegde RN*, **Parashuraman S*#**, Iorio F, Ciciriello F, Capuani F, Carissimo A, Carrella D, Belcastro V, Subramanian A, Bounti L, Persico M, Carlile G, Galletta L, Thomas DY, Di Bernardo D, Luini A# (2015) Unravelling druggable signalling networks that control F508del-CFTR proteostasis. *Elife*, 4.
denotes co-correspondence

As Primary author:

1. Beznoussenko GV*, **Parashuraman S***, Rizzo R, Polishchuk R, Martella O, Di Giandomenico D, Fusella A, Spaar A, Sallese M, Capestrano MG, Pavelka M, Vos MR, Rikers YG, Helms V, Mironov AA, Luini A (2014) Transport of soluble proteins through the Golgi occurs by diffusion via continuities across cisternae. *Elife*, 3.
2. Rizzo R *, **Parashuraman S***, Puri C, Lucocq J, Luini A (2013) The dynamics of engineered resident proteins in the mammalian Golgi complex relies on cisternal maturation. *J. Cell. Biol.* 201(7):1027-36.
3. **Parashuraman S***, Madan R*, Mukhopadhyay A (2010) NSF independent fusion of Salmonella-containing late phagosomes with early endosomes. *FEBS Lett.* 2010. 584(6): 1251-6.
* denotes equal contribution

Other peer-reviewed articles:

1. Brandolini L, d'Angelo M, Antonosante A, Villa S, Cristiano L, Castelli V, Benedetti E, Catanesi M, Aramini A, Luini A, **Parashuraman S**, Mayo E, Giordano A, Cimini A, Allegretti M (2017) Differential protein modulation by ketoprofen and ibuprofen underlines different cellular response by gastric epithelium. *J Cell Physiol.* In press.
2. Campelo F, van Galen J, Turacchio G, **Parashuraman S**, Kozlov MM, García-Parajo MF, Malhotra V (2017) Sphingomyelin metabolism controls the shape and function of the Golgi cisternae. *Elife*, 6.
3. Capasso S, Sticco L, Rizzo R, Pirozzi M, Russo D, Dathan NA, Campelo F, van Galen J, Hölttä-Vuori M, Turacchio G, Hausser A, Malhotra V, Riezman I, Riezman H, Ikonen E, Luberto C, **Parashuraman S**, Luini A, D'Angelo G (2017) Sphingolipid

- metabolic flow controls phosphoinositide turnover at the trans-Golgi network. **EMBO J.** 36(12): 1736-1754.
4. Raote I, Ortega Bellido M, Pirozzi M, Zhang C, Melville D, **Parashuraman S**, Zimmermann T, Malhotra V (2017) TANGO1 assembles into rings around COPII coats at ER exit sites. **J Cell Biol.** 216(4):901-909.
 5. Curwin AJ, Brouwers N, Alonso Y Adell M, Teis D, Turacchio G, **Parashuraman S**, Ronchi P, Malhotra V (2016) ESCRT-III drives the final stages of CUPS maturation for unconventional protein secretion. **Elife.** 5.
 6. Chesi G, Hegde RN, Iacobacci S, Concilli M, **Parashuraman S**, Festa BP, Polishchuk EV, Di Tullio G, Carissimo A, Montefusco S, Canetti D, Monti M, Amoresano A, Pucci P, van de Sluis B, Lutsenko S, Luini A, Polishchuk RS (2016) Identification of p38 MAPK and JNK as new targets for correction of Wilson disease-causing ATP7B mutants. **Hepatology.** 63(6):1842-59.
 7. Madan R, Rastogi R, **Parashuraman S**, Mukhopadhyay A. (2012) Salmonella acquires lysosome-associated membrane protein 1 (LAMP1) on phagosomes from Golgi via SipC protein-mediated recruitment of host Syntaxin6. **J. Biol. Chem.** 287(8): 5574-87.
 8. Mukherjee K, **Parashuraman S**, Krishnamurthy G, Majumdar J, Yadav A, Kumar R, Basu SK, Mukhopadhyay A (2002) Diverting intracellular trafficking of Salmonella to the lysosome through activation of the late endocytic Rab7 by intracellular delivery of muramyl dipeptide **J. Cell Sci.** 115 (Pt 18): 3693-701.
 9. Mukherjee K, **Parashuraman S**, Raje M, Mukhopadhyay A (2001) SopE acts as an Rab5-specific nucleotide exchange factor and recruits non-prenylated Rab5 on Salmonella containing phagosomes to promote fusion with early endosomes. **J Biol. Chem.** 276(26): 23607-15.

Reviews:

1. Hegde RN, Subramanian A, Pothukuchi P, **Parashuraman S**, Luini A (2017) Rare ER protein misfolding-mistrafficking disorders: Therapeutic developments. **Tissue Cell.** 49(2 Pt A):175-185.
2. Rizzo R, **Parashuraman S**, D'Angelo G, Luini A (2017) GOLPH3 and oncogenesis: What is the molecular link? **Tissue Cell.** 49(2 Pt A):170-174.
3. Russo D, **Parashuraman S**, D'Angelo G (2016) Glycosphingolipid-Protein Interaction in Signal Transduction. **Int J Mol Sci.** Oct 15;17(10).
4. Luini A, **Parashuraman S** (2016) Signaling at the Golgi: sensing and controlling the membrane fluxes. **Curr Opin Cell Biol.** 39:37-42.
5. Rizzo R, **Parashuraman S**, Luini A (2014) Correlative video-light-electron microscopy: development, impact and perspectives. **Histochem Cell Biol.** 142(2):133-8.
6. **Parashuraman S**, Mukhopadhyay A (2005) Assay and functional properties of SopE in the recruitment of Rab5 on Salmonella-containing phagosomes. **Methods Enzymol.** 403:295-309.

Book Chapters:

1. Luini A and **Parashuraman S** (2016) Golgi and TGN. In Encyclopedia of Cell Biology, Bradshaw RA and Stahl PD (ed) 2:183-191 Elsevier Inc.
2. Chavan SG, Tripathi KP, Piccirilo M, Roy P, Guarracino MR, Luini A, **Parashuraman S** (2016) Dissecting the Functions of the Secretory Pathway by Transcriptional Profiling. In Dynamics of Mathematical Models in Biology Rogato, A, Zazzu, V, Guarracino, MR (ed) pp 79-87 Springer International Publishing, Switzerland.
3. Piccirilo M, Tripathi KP, Chavan SG, Varavallo A, **Parashuraman S**, Guarracino MR (2016) Reconstructing a Genetic Network from Gene Perturbations in Secretory Pathway of Cancer Cell Lines. In Dynamics of Mathematical Models in Biology Rogato, A, Zazzu, V, Guarracino, MR (ed) pp 65-77 Springer International Publishing, Switzerland.
4. Tripathi KP, Chavan SG, **Parashuraman S**, Piccirilo M, Magliocca S, Guarracino MR (2015) Comparison of gene expression signature using rank based statistical inference. In International Meeting on Computational Intelligence Methods for Bioinformatics and Biostatistics pp 28-41 Springer International Publishing, Switzerland.
5. **Parashuraman S**, Piccirilo M, Magliocca S, Guarracino MR (2015) Comparison of Gene Expression Signature Using Rank Based Statistical Inference. Computational Intelligence Methods for Bioinformatics and Biostatistics, Revised Selected Papers Angelini C, Rancoita PMV, Rovetta S (ed) 9874: 28-41, Springer International Publishing, Switzerland.

Patents:

1. 2015 Kinase and ubiquitin ligase inhibitors and uses thereof. (No. 102015000084815)

Non-academic publications:

1. D'angelo G and Parashuraman S (2012) The descent of language: A conversation between two jobless biologists S&F n. 10_2013; ISSN 2036-2927.

Curriculum Vitae et Studiorum di Chiara Peres

Date of birth: 04th Dec 1985

Email: chiara.peres85@gmail.com

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Research Interests

Non-linear advanced microscopy techniques (two-photon fluorescence excitation, STED, SHG and CARS microscopy), polarization-resolved microscopy, tissues structure morphological and quantitative analysis, *in vivo* calcium signal imaging and analysis, *in vivo* morphological and functional skin imaging, *in vivo* light imaging techniques on mice.

Current Position

1st Jan 2020 – 31st Dec 2021 Post-doc fellow at IBBC Department of CNR, Monterotondo, Rome for the TELETHON project: “A therapeutic approach for rare genodermatoses caused by aberrant connexin hemichannels”. Responsible for the *in vivo* light imaging instrumentations for EMMA.

Previous Positions

1st June 2016 – 31st Dec 2019 Post-doc fellow at IBCN Department of CNR, Monterotondo, Rome.
Co-design, assembly, alignment and everyday optimization of a 2PE - STED microscope coupled with a commercial scanning-head for *in vivo* imaging.
Design, building, usage of optical architecture for *in vivo* mouse studies.
Mice surgery and mouse colony management.

1st Jan – 30th April 2016 Fellow at IIT, Nanoscopy group and Nikon @ IIT imaging center
Optimization of optical architectures working in the R&D of IIT Nikon center, polarization resolved second harmonic generation studies of biological samples.

Education

Apr 2016 *Ph.D., Nanosciences*
Italian Institute of Technology (IIT) and University of Genova (joint PhD program), Italy
Ph.D Thesis Title: “*Design and Development of Advanced Light Microscopy Methods*”.
Tutor: Dr. Paolo Bianchini; Supervisor: Prof. Alberto Diaspro.

Jul-Dec 2015 *Visiting Student*
Massachusetts Institute of Technology (MIT), Boston, MA, USA.
Project Title: “Polarization-based quantitative phase microscope”.
Tutor: Dr. Zahid Yaqoob; Supervisor: Prof. Peter T.C. So.

2012 *M.Sc. in Physics (curriculum Biophysics)*. Score: 110 cum laude.
Università degli Studi di Palermo, Italy.
Master Thesis Title: “*Production and characterization of BSA aggregates gels*”.
Supervisor: Prof. Maurizio Leone; Co-supervisor: Prof. Valeria Militello

Curriculum Vitae et Studiorum

2009 *B. Sc. in Physics*. Score: 110 cum laude.
Università degli Studi di Palermo, Italy
Supervisor: Prof. Antonio Cupane

Professional Experiences

- May 5th – December 30th 2019 Visiting Scientist at SIAIS Protein Center at ShanghaiTech University (Shanghai, China)
- Alignment and optimization of the 2PE external line of a Leica STED SP8 confocal commercial microscope for 2PE-STED.
 - 2PEF and SHG microscopy for *in vivo* imaging of genetically expressed calcium sensors in the skin and in the brain of specific murine models.
- Invited by: Prof. Guang Yang and Prof. Fabio Mammano
- Jan 1st – April 30th 2016 Fellow at the Optical Nanoscopy Group at IIT (Genoa, Italy)
- Optimization of optical architectures in the R&D of IIT Nikon centre.
- Supervisors: Dr. Paolo Bianchini, Prof. Alberto Diaspro
- July 1st – Nov 30th 2015 Visiting Student at the Laser Biomedical Research Center at MIT (Boston, MA, USA).
- QPI and polarization-based quantitative phase microscopes.
- Supervisors: Dr. Zahid Yaqoob, Prof. Peter T.C. So
- Jan 1st 2013– Dec 30th 2015 PhD fellowship at the Optical Nanoscopy Group at IIT (Genoa, Italy)
- 2PEF and SHG microscopy, polarization-resolved imaging, STED microscopy.
- Supervisors: Dr. Paolo Bianchini, Prof. Alberto Diaspro
- Feb 1st – Dec 22nd 2012 Master Thesis Internship at the *Biophysmol Lab* (Palermo, Italy).
- UV, Vis and IR Spectroscopy and Atomic Force Microscopy. Biological sample preparation
- Supervisors: Dr. Giovanna Navarra, Prof. Valeria Militello, Prof. Maurizio Leone
- April 1st – Oct 30th 2008 Internship at the *CNR- IBF department* (Palermo, Italy).
- Laser light scattering on protein hydrogels.
- Supervisors: Dr. Mauro Manno, Prof. Pier Luigi San Biagio

Professional Skills

- Non-linear Microscopy: design, assembly and optimization of a two-photon microscope for *in vivo* measurement on anesthetized animals. Coupling of a two-photon laser source with commercial microscopes for 2PE and polarization-resolved SHG measurements.
- Super-resolution Microscopy: design, assembly and optimization of multi-color STED microscopes.
- Expert user of confocal, two-photon excitation, second harmonic generation and STED microscopy on custom-made and commercial microscopes.

Curriculum Vitae et Studiorum

- *In vivo* calcium imaging: analysis and characterization of the fluorescence signal of endogenous and exogenous calcium sensors in the skin, in the dorsal skinfold chamber, in the brain and in the organotypic cultures from inner ear and from dorsal skin of different murine models.
- Expert user of qualitative and quantitative methods for tissue samples analysis based on nonlinear microscopy techniques (two-photon microscopy, polarization resolved Second Harmonic Generation Microscopy).
- QPI and Polarization Resolved Imaging: assembly and development of a polarization-based quantitative phase microscope, and implementation of related measurements analysis system.
- FTIR and fluorescence spectroscopy measurements on biological samples.
- Experience in design, building and usage of several optical systems for different *in vivo* imaging techniques on mice.
- Experience with embedded systems design using the Arduino programming environment.
- Professional user of: MatLab, Origin, Fiji/ImageJ and common softwares related to image analysis, scientific research and publishing.
- Mouse handling and restrain skills, basic mouse injection capability and knowhow of dorsal skinfold chamber application and calvaria exposition in mice. Basics of mouse colony management.

Awards

- 2021: Italian **National Grant** to attend the National conference XXV Congresso Nazionale SIBPA 2021, June 28 – July 1, 2021, online.
- 2015: 1st place for the best image in the International competition “**Art of Science Image Contest**” organized by the Biophysical Society.
- 2015: International **Travel Award** provided by the Biophysical Society to attend the 59th Biophysical Society Annual Meeting.
- 2014: Italian **National Grant** to attend the National conference XXII Congresso Nazionale SIBPA 2014, September 21-24, 2014, Palermo, Italy.

Attendance to Schools & Workshops

- *Corso di Formazione ed Aggiornamento per la Protezione degli Animali da Laboratorio nella Ricerca Scientifica*, February 18-22, 2019, Università Cattolica, Roma, Italy.
- *Scuola di Calcolo Scientifico con MATLAB*, July 18-29, 2016, Università degli Studi di Palermo, Palermo, Italy.
- *International School of Biophysics “Antonio Borsellino”, 43rd Course: Nanoscale biophysics: focus on methods and techniques*, April 17 – 24, 2016, Erice (TP), Italy.
- *The Leica Microsystem 4th European Super-resolution User Club Meeting*, June 18-19, 2014, Weatherall Institute of Molecular Medicine, University of Oxford, United Kingdom.
- *School of Photonics 2014*, March 30- April 3, 2014, Cortona, Italy.
- *3rd IIT International Course on Advanced Optical Microscopy Methods*, December 17, 2013, Genoa, Italy.

Curriculum Vitae et Studiorum

- *The Leica Microsystem 3rd European Super-resolution User Club Meeting*, June 17-19, 2013, Genoa, Italy.

Teaching Experiences

- Teacher of theoretical aspects and of hands-on practice of alignment techniques for a custom-made microscope at the *1st NIC@IIT - MICROSCOPY 2.0 PRACTICAL WORKSHOP on ADVANCED MICROSCOPY*, December 2-5, 2014, Genoa, Italy.

Languages

Italian (native), English (TOEFL, 19th Oct 2012. Total Score: 100)

Publications

Published

1. Kuang Y., Zorzi V., Buratto D., Ziraldo G., Mazzarda F., Peres C., Nardin C., Salvatore A.M., Chiani F., Scavizzi F., Raspa M., Qiang M., Chu Y., Shi X., Li Y., Liu L., Shi Y., Zonta F., Yang G., Lerner R.A., Mammano F.; “*A potent antagonist antibody targeting connexin hemichannels alleviates Clouston syndrome symptoms in mutant mice*”, *EBioMedicine*, 57,102825 (2020).
2. Mazzarda F., D'Elia A., Massari R., De Ninno A., Bertani F.R., Businaro L., Ziraldo G., Zorzi V., Nardin C., Peres C., Chiani F., Tettey-Matey A., Raspa M., Scavizzi F., Soluri A., Salvatore A.M., Yang J., Mammano F.; “*Organ-on-chip model shows that ATP release through connexin hemichannels drives spontaneous Ca²⁺ signaling in non-sensory cells of the greater epithelial ridge in the developing cochlea*”, *Lab On Chip* 20(16) 3011-3023 (2020).
3. Nardin C., Peres C., Mazzarda F., Ziraldo G., Salvatore A.M., Mammano F.; “*Photosensitizer Activation Drives Apoptosis by Interorganellar Ca²⁺ Transfer and Superoxide Production in Bystander Cancer Cells*”, *Cells* 8 (10), 1175 (2019).
4. Fetoni A. R., Zorzi V., Paciello F., Ziraldo G., Peres C., Raspa M., Scavizzi F., Salvatore A.M., Crispino G., Tognola G., Gentile G., Spampinato A.G., Cuccaro D., Guarnaccia M., Morello G., Van Camp G., Fransen E., Brumat M., Girotto G., Paludetti G., Gasparini P., Cavallaro S., Mammano F.; “*Cx26 partial loss causes accelerated presbycusis by redox imbalance and dysregulation of Nfr2 pathway*”, *Redox Biology*, 19, 301-307 (2018).
5. Zorzi V., Paciello F., Ziraldo G., Peres C., Mazzarda F., Nardin C., Pasquini M., Chiani F., Raspa M., Scavizzi F., Carrer A., Crispino G., Ciubotaru C. D., Monyer H., Fetoni A. R., Salvatore A.M., Mammano F.; “*Mouse Panx1 is dispensable for hearing acquisition and auditory function*”, *Frontiers in molecular neuroscience*, 10, 397 (2017).
6. Xu L., Carrer A., Zonta F., Qu Z., Ma P, Li S., Ceriani F., Buratto D., Crispino G., Zorzi V., Ziraldo G., Bruno F., Nardin C., Peres C., Mazzarda F., Salvatore A. M., Raspa M., Scavizzi F., Chu Y., Xie S., Yang X., Liao J., Liu X., Wang W., Wang S., Yang G., Lerner R. A., Mammano F.; “*Design and*

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- characterization of a human monoclonal antibody that modulates mutant connexin 26 hemichannels implicated in deafness and skin disorders*”, *Frontiers in molecular neuroscience*, 10, 298 (2017).
7. Coluccino L., Peres C., Gottardi R., Bianchini P., Diaspro A., Ceseracciu L.; “*Anisotropic viscoelastic biomechanical mapping of knee meniscus cartilage*”, *JABFM*, 15 (1) 77-83 (2016).
 8. Korobchevskaya K., Peres C., Li Z., Antipov A., Sheppard C.J.R., Diaspro A. and Bianchini P. : “*Intensity Weighted Subtraction Microscopy Approach for Image Contrast and Resolution Enhancement*”, *Sci. Rep.* 6, 2516 (2016).
 9. Picone P., Navarra G., Peres C., Contardi M., San Biagio P.L., Di Carlo M.; “*Data concerning the proteolytic resistance and oxidative stress in LAN5 cells after treatment with BSA hydrogels*”, *Data in Brief*, 9, 324-327 (2016).
 10. Navarra G., Peres C., Contardi M., Picone P., San Biagio P.L., Di Carlo M., Giacomazza D., Militello V.; “*Heat- and pH-induced BSA conformational changes, hydrogels formation and their applications as 3D cell scaffold.*”, *Archives of biochemistry and biophysics*, 606, 134-142 (2016).
 11. Hosseini P., Zhou R., Kim Y.I., Peres C., Diaspro A., Kuang C., Yaqoob Z., So P.T.C.: “*Pushing phase and amplitude sensitivity limits in interferometric microscopy*”, *Opt. Lett.* 41, 1656-1659 (2016).
 12. Bianchini P., Peres C., Oneto M., Galiani S., Vicidomini G., Diaspro A.; “*STED nanoscopy: a glimpse into the future*”, *Cell Tissue Res.* 360 (1) 143-150 (2015).
 13. Hernández Coto I., Peres C., Znacchi Cella F., d’Amora M., Christodoulou S., Bianchini P., Diaspro A., Vicidomini G.; “*A new filtering technique for removing anti-Stokes emission background in gated CW-STED microscopy*”, *J. Biophotonics* 1–5 (2014).

Under Revision

1. Nardin C., Peres C., Putti S., Orsini T., Colussi C., Mazzarda F., Raspa M., Scavizzi F., Salvatore A. M., Chiani F., Tettey-Matey A., Kuang Y., Yang G., Retamal M. A., Mammano F.; “*Photodynamic therapy in combination with S-nitrosoglutathione dramatically improves melanoma treatment efficacy*”, *Cancers*.
2. Donati V. †, Peres C. †, Nardin C., Scavizzi F., Raspa M., Ciubotaru C. D., Pedersen, M.G., Bortolozzi M., Mammano F., “*Calcium signaling in the photodamaged skin: in vivo experiments and mathematical modeling*”, *Function*.

Submitted

1. Peres C., Nardin C., Yang G., Mammano F., “*Commercially-derived versatile optical architecture for two-photon STED, wavelength mixing and label-free microscopy*”, (2021)

Preprint

2. Peres C., Nardin C., Yang G., Mammano F., “*How to Extend the Capabilities of a Commercial Two-Photon Microscope to Perform Super-Resolution Imaging, Wavelength Mixing and Label-Free Microscopy*”, *Bioarchive* (2021)
3. Donati V., Peres C., Nardin C., Scavizzi F., Raspa M., Ciubotaru C. D., Cojok D. A., Bortolozzi M., Mammano F., “*Calcium signaling in the photodamaged skin*”, *Bioarchive* (2021).

Contributions to conferences

Oral Communications

1. Peres C., Nardin C., Yang G., Mammano F., “A commercially-derived multimodal microscope for 2P-*STED*, 2C-2PE, *SHG* and *CARS* imaging”, **XXII Congresso Nazionale SIBPA**, June 28 - July 1, 2021, Italy.
2. Peres C., D’Autilia F., Castello M., Lanzaò L., Bianchini P., Diaspro A.; “A novel approach to the analysis of Polarization-Resolved *SHG* images”, **Focus On Microscopy 2015**, March 29 - April 1, 2015, Göttingen, Germany.
3. Peres C., D’Autilia F., Oneto M., Coluccino L., Cesaracciu L., Bianchini P., Diaspro A. “*Tissues Imaging By Means Of Polarization-Resolved SHG Microscopy*”, **XXII Congresso Nazionale SIBPA**, September 21-24, 2014, Palermo, Italy.

Posters

1. Bianchini P. , Korobchevskaya K., Peres C., Saggau P., Sheppard C.J.R., Diaspro A.: “*Near-Infrared Nanoscopy, towards label-free approaches*”, **Focus On Microscopy 2016**, March 20-23, 2016 Taipei, Taiwan.
2. Peres C., Zhou R., Hosseini P., Martin A.F., Bianchini P., Diaspro A., So P.T.C., Yaqoob Z.: “*Polarization-Resolved phase microscopy for Quantitative Retardance Imaging*”. **60th Biophysical Society Annual Meeting**, February 27- March 2, 2016, Los Angeles, California, USA.
3. Korobchevskaya K., Peres C., D’Autilia F., Mazumder N., Lanzaò L., Saggau P., Sheppard C.J.R., Diaspro A., Bianchini P.: “*Label-free linear and non-linear excitation Nanoscopy*”. **60th Biophysical Society Annual Meeting**, February 27- March 2, 2016, Los Angeles, California, USA.
4. Oneto M., Peres C., D’Autilia F., Mazumder N., Galiani S., Diaspro A., Bianchini P.: “*Chromatic aberration in 3D multicolor STED nanoscopy*”. **Focus On Microscopy 2015**, March 29- April 1, 2015, Göttingen, Germany.
5. Peres C., Oneto M., D’Autilia F., Galiani S., Lanzaò L., Vicidomini G., Diaspro A., Bianchini P.: “*3 Color - 3 Dimensional STED nanoscopy*”. **59th Biophysical Society Annual Meeting**, February 6-11, 2015, Baltimore, Maryland, USA.
6. Militello V., Navarra G., Vetri V., Peres C., Leone M. “*BSA hydrogels: from the early aggregates to the final novel biomaterials*”. **IUPAB 2014**, August 3-7, 2014, Brisbane, Australia.
7. Navarra G., Peres C., Carfi Pavia F., Leone M., Militello V. “*Spectroscopic and microscopic characterization of BSA hydrogels: towards new biomaterials*”. **SIB 2014**, July 2-4, 2014, Palermo, Italy.
8. Coluccino L., Peres C., Bianchini P., Diaspro A., Ayadi F., Athanassiou A., Cesaracciu L. “*Polyvinylalcohol engineered hydrogel for knee meniscus regeneration*”. **TERMIS EU 2014**, June 10-13, 2014 Genoa, Italy.
9. Diaspro A., Sheppard C. J., Bianchini P., Vicidomini G., Cella Zancacchi F., Peres C. “*Can fluorescence and SHG data be enriched by Mueller Matrix signature?*”. **Focus On Microscopy 2014**, April 13-16, 2014, Sydney, Australia.

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10. Peres C., D'Autilia F., Lanzaò L., Bianchini P., Diaspro A. “Polarization-resolved SHG towards collagen imaging”. **58th Biophysical Society Annual Meeting**, February 15-19 2014, San Francisco, California. *Biophysical Journal, Volume 106, Issue 2, Supplement 1, 28 January 2014, 204.*
11. Hernández Coto I., Bianchini P., Peres C., De Miguel G., Diaspro A., Vicidomini G. “A new efficient implementation of 2PE-STED microscopy”. **58th Biophysical Society Annual Meeting**, February 15-19 2014, San Francisco, California. *Biophysical Journal, Volume 106, Issue 2, Supplement 1, 28 January 2014, 605.*
12. Peres C., D'Autilia F., Coluccino L., Cesaracciu L., Bianchini P., Diaspro A. “Polarization- modulated SHG characterization of collagen for meniscus regeneration”. **Methods and Application of Fluorescence 13**, September 8-11 2013, Genoa, Italy.
13. Peres C., Militello V., Navarra G., D'Amico M., Leone M., Vetri V. “BSA hydrogels: from the early aggregates to the final novel biomaterials”. **FISMAT13**, September 9-13, 2013, Milan, Italy.

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Roma li 14/09/2021

FIRMA

